

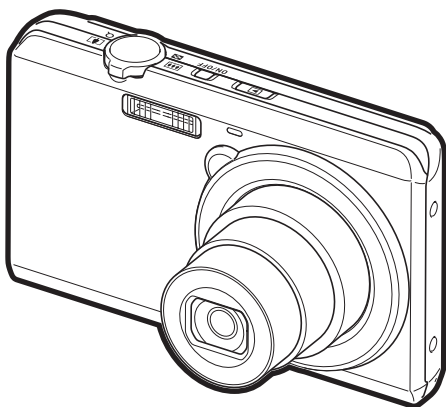
CASIO®

Digital Camera

EX-ZS15

User's Guide

E



Thank you for purchasing this CASIO product.

- Before using it, be sure to read the precautions contained in this User's Guide.
- Keep the User's Guide in a safe place for future reference.
- For the most up-to-date information about this product, visit the official EXILIM Website at <http://www.exilim.com/>

EXILIM

Unpacking

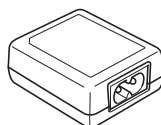
As you unpack your camera, check to make sure that all items shown below are included. If anything is missing, contact your original retailer.



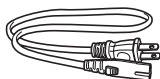
Digital camera



Rechargeable lithium ion
battery (NP-120)



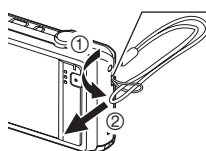
USB-AC adaptor
(AD-C53U)



* The shape of the power
cord plug varies
according to country or
geographic area.

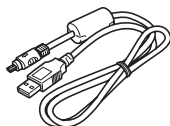
Power cord

To attach the strap to the camera

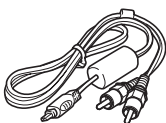


Attach strap here.

Strap



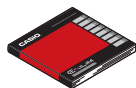
USB cable



AV cable



CD-ROM



Basic Reference

Read this first!

- The contents of this manual are subject to change without notice.
- The contents of this manual have been checked at each step of the production process. Feel free to contact us if you notice anything that is questionable, erroneous, etc.
- Any copying of the contents of this User's Guide, either in part or its entirety, is forbidden. Except for your own personal use, any other use of the contents of this manual without the permission of CASIO COMPUTER CO., LTD. is forbidden under copyright laws.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or lost profits suffered by you or any third party due to the use or malfunction of this product.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages, lost profits, or claims by third parties arising out of the use of Photo Transport, or YouTube Uploader for CASIO.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or lost profits caused by loss of memory contents due to malfunction, repair, or any other reason.
- Note that the example screens and product illustrations shown in this User's Guide may differ somewhat from the screens and configuration of the actual camera.

LCD Panel

The liquid crystal panel of the monitor screen uses high-precision technology that provides a pixel yield in excess of 99.99%. This means that some very small number of pixels may not light or may remain lit at all times. This is due to the characteristics of the liquid crystal panel, and does not indicate malfunction.

Take test shots

Before shooting your final image, shoot a test shot to ensure that the camera is recording correctly.

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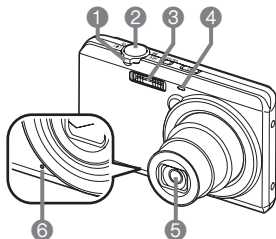
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General Guide

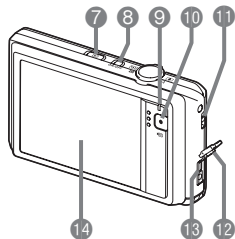
The numbers in parentheses indicate the pages where each item is explained.

Front



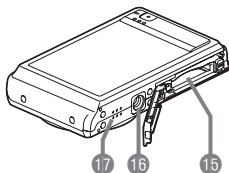
- 1 Zoom controller
(pages 27, 35, 55, 55)
- 2 Shutter button (page 27)
- 3 Flash (page 33)
- 4 Front lamp
(pages 25, 42)
- 5 Lens
- 6 Microphone (page 38)

Back



- 7 [▶] (PLAY) button
(pages 24, 29)
- 8 [ON/OFF] (Power)
(pages 15, 20, 24)
- 9 Back lamp
(pages 16, 18, 24, 27, 34)
- 10 [●] (Movie) button
(pages 28, 37)
- 11 Strap hole (page 2)
- 12 Connector cover
- 13 [USB/AV] port
(pages 16, 17, 56, 68, 76)
- 14 Monitor screen
(pages 9, 10)

Bottom



- 15 Battery/memory card slots (pages 14, 22, 100, 101)
- 16 Tripod hole
Use this hole when attaching to a tripod.
- 17 Speaker

Monitor Screen Contents

The monitor screen uses various indicators, icons, and values to keep you informed of the camera's status.

- The sample screens in this section are intended to show you the locations of all the indicators and figures that can appear on the monitor screen in various modes. They do not represent screens that actually appear on the camera.

■ Snapshot Recording



- 1 Tab (page 24)
- 2 Focus mode (page 43)
- 3 Self-timer mode (page 42)
- 4 Flash (page 33)

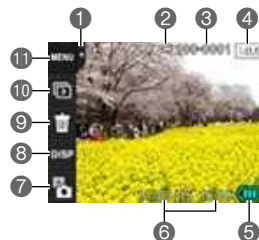
- 5 Snapshot image size (page 45)
- 6 Movie quality (pages 37, 47)
- 7 Digital zoom (page 36)
- 8 Remaining snapshot memory capacity (page 113)
- 9 Remaining movie memory capacity (pages 37, 113)
- 10 Battery level indicator (page 19)
- 11 PLAY mode icon (page 24)
- 12 Information icon (page 10)
- 13 Flash icon (page 33)
- 14 Recording mode icon (pages 26, 33)
- 15 Menu icon (page 41)

■ Movie Recording



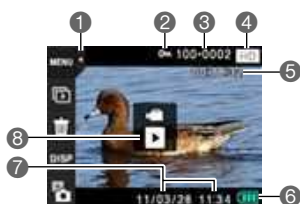
- 1 Movie quality (pages 37, 47)
- 2 Recording time switch icon (page 37)
- 3 Movie remaining time icon (page 37)
- 4 Remaining movie memory capacity/
Movie recording time (pages 37, 113)
- 5 Digital zoom (page 36)

■ Snapshot Viewing



- 1 Tab (page 24)
- 2 Protect indicator (page 59)
- 3 Folder name/file name (page 80)
- 4 Snapshot image size (page 45)
- 5 Battery level indicator (page 19)
- 6 Date/time (pages 20, 87)
- 7 REC mode icon (page 24)
- 8 Information icon (page 10)
- 9 Delete icon (page 30)
- 10 Slideshow icon (page 54)
- 11 Menu icon (page 58)

Movie Playback



- 1 Tab (page 24)
- 2 Protect indicator (page 59)
- 3 Folder name/file name (page 80)
- 4 Movie quality (pages 37, 47)
- 5 Movie recording time (page 53)
- 6 Battery level indicator (page 19)
- 7 Date/time (pages 20, 87)
- 8 "►" Movie play icon (page 53)

Selecting Display Information (DISP)

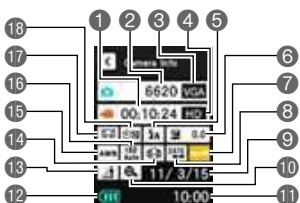
Each touch of "DISP" will cycle through settings that display or hide on-screen information. You can configure separate settings for the REC mode and PLAY mode.

- If "DISP" is not displayed on the screen, touch the tab to display it.
- Display information cannot be changed during movie recording.

Off	No information displayed.
Information On	Shows information about image settings, etc.
Status On	Shows more detailed information about settings. • When Status On is selected, you will not be able to view the subject on the monitor screen.

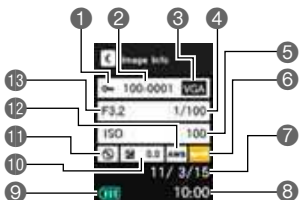
Info Screens

REC Mode Info Screen



- 1 Remaining movie memory capacity
- 2 Remaining snapshot memory capacity
- 3 Snapshot image size
- 4 Movie quality
- 5 Flash
- 6 Exposure compensation
- 7 Eye-Fi setting
- 8 Timestamp indicator
- 9 Date
- 10 Digital zoom
- 11 Time
- 12 Battery level indicator
- 13 Lighting setting
- 14 Anti Shake
- 15 White balance setting
- 16 ISO sensitivity
- 17 Face Detection/Focus mode
- 18 Self-timer mode

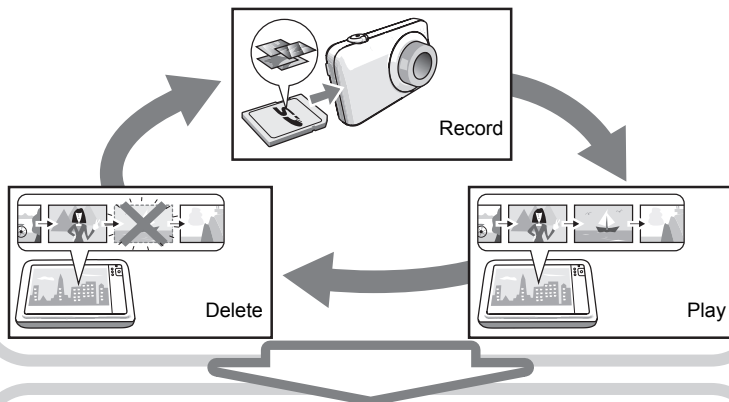
PLAY Mode Info Screen



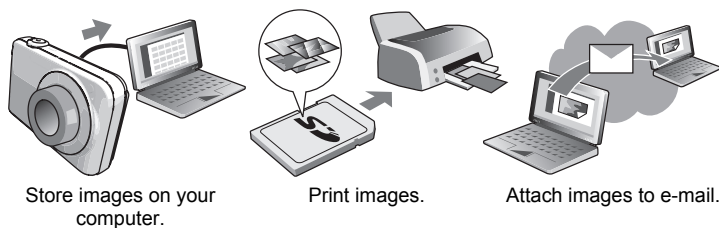
- 1 Protect indicator
- 2 Folder name/file name
- 3 Snapshot image size
- 4 Shutter speed
- 5 ISO sensitivity
- 6 Eye-Fi setting
- 7 Date
- 8 Time
- 9 Battery level indicator
- 10 Exposure compensation
- 11 Flash
- 12 White balance setting
- 13 Aperture value

What is a digital camera?

A digital camera stores images on a memory card, so you can record and delete images a countless number of times.



You can use the images you record in a variety of different ways.



What you can do with your CASIO camera

Your CASIO camera is packed with a powerful selection of features and functions to make recording of digital images easier, including the following three main functions.

Simple touch panel operation

The monitor screen is a touch panel that can be used to perform operations.



See page **13** for more information.

Face Detection

Point the camera at a person and it automatically detects the person's face for beautiful portraits every time.



See page **47** for more information.

BEST SHOT

Simply select the sample scene you want and the camera sets up automatically. Then all you need to do is press the shutter button for perfect images.



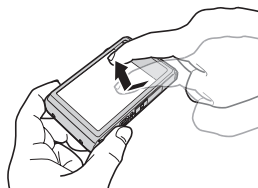
See page **39** for more information.

Using the Touch Panel

The monitor screen of the camera is a touch panel. This means you can perform the following operations by touching the screen with your fingers.

Touch

Momentarily touching the screen with your finger. Touch the screen to select an icon or menu item, and to configure settings.



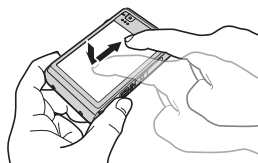
Touch-and-hold

Holding your finger against the screen. Touch and hold the screen to scroll images at high speed, or to perform continual frame-by-frame playback of a movie.



Drag

Holding your finger against the screen as you drag it up, down, left, or right. Use drag to move a screen image to a different location, and to scroll between images.



IMPORTANT!

- Never use a pointed or hard object to perform screen operations. Doing so can damage the screen.
- The touch panel is pressure-sensitive. Make sure you touch the panel with sufficient pressure when operating it.

NOTE

- Applying a commercially available LCD protective sheet will reduce the operation sensitivity of the monitor screen.
- If touch panel item selections are not performed as expected, calibrate the touch panel (page 88).

First, charge the battery prior to use.

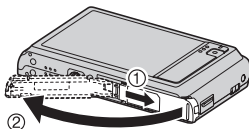
Note that the battery of a newly purchased camera is not charged. Perform the steps below to load the battery into the camera and charge it.

- Your camera requires a special CASIO rechargeable lithium ion battery (NP-120) for power. Never try to use any other type of battery.

To load the battery

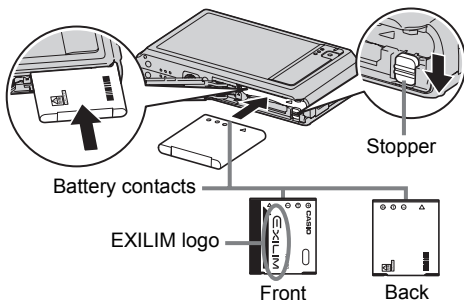
1. Open the battery cover.

Pressing the battery cover, slide it in the direction indicated by the arrow.



2. Load the battery.

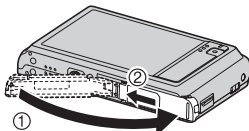
With the EXILIM logo on the battery facing downwards (in the direction of the lens), hold the stopper next to the battery in the direction indicated by the arrow as you slide the battery into the camera. Press the battery in until the stopper secures it in place.



3. Close the battery cover.

Pressing the battery cover against the camera, slide it closed.

- For information about how to replace the battery, see page 100.



Charge the Battery

You can use either of the two following methods to charge the camera's battery.

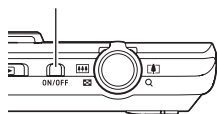
- USB-AC adaptor
- USB connection to a computer

■ To charge with the USB-AC adaptor

1. Turn off the camera.

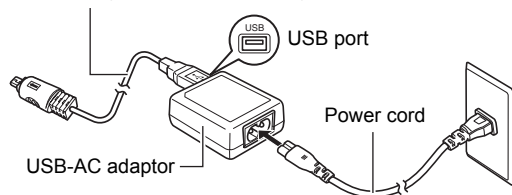
Check to make sure that the camera's monitor screen is blank. If it isn't, press [ON/OFF] (Power) to turn off the camera.

[ON/OFF] (Power)



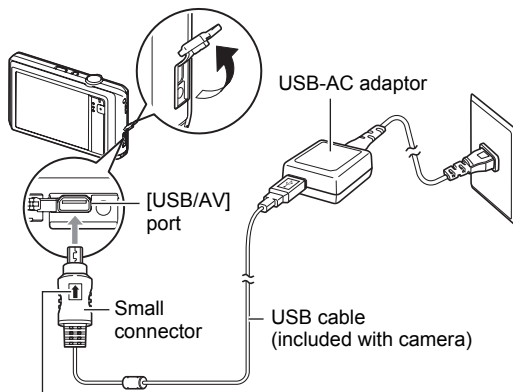
2. After connecting the supplied USB cable to the USB-AC adaptor, plug the power cord into a household power outlet.

USB cable (included with camera)



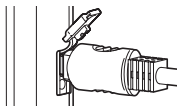
3. Connect the USB cable to the camera.

The back lamp should light red, indicating that charging has started. The back lamp will go out when charging is complete. It takes about 110 minutes to bring a fully dead battery to a full charge.



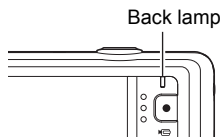
Making sure that the ↑ mark on the USB cable connector is towards the lens side, connect the cable to the camera.

- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.



Back Lamp Operation

Lamp Status	Description
Lit Red	Charging
Flashing Red	Abnormal ambient temperature, USB-AC adaptor problem, battery problem, or charging terminated by timer (page 99)
Off	Charging complete



4. After charging is complete, disconnect the USB cable from the camera and then unplug the power cord from the power outlet.

■ To charge using a USB connection to a computer

The battery loaded in the camera is charged whenever the camera is connected directly to a computer with the USB cable.

- Depending on the setup of your computer, you may not be able to charge the camera's battery over a USB connection. If this happens, use of the USB-AC adaptor that comes with the camera is recommended.

★ IMPORTANT!

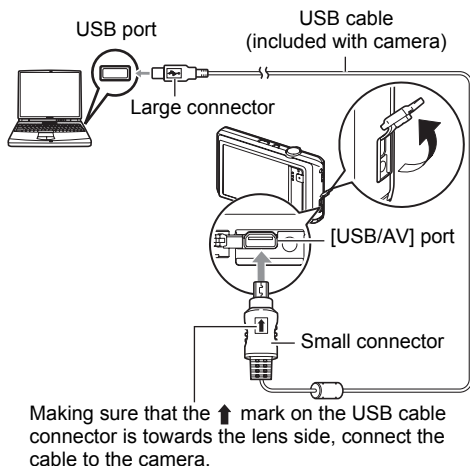
- The first time you connect the camera to your computer with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.

1. Press [ON/OFF] (Power) to turn off the camera.

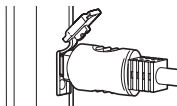
2. With your computer turned on, connect the camera to it.

The back lamp should light red, indicating that charging has started.

The back lamp will go out when charging is complete. It takes about 130 minutes to achieve a full charge. Charging may take longer depending on charging conditions.

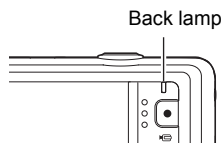


- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.



Back Lamp Operation

Lamp Status	Description
Lit Red	Charging
Flashing Red	Abnormal ambient temperature, charging taking abnormally long, or battery problem (page 99)
Off	Charging complete



3. After charging is complete, disconnect the USB cable from the camera and then from the computer.

NOTE

- Charging continues while a camera is connected to a computer's USB port, even if the camera is turned off. Under this condition, the back lamp operates as described under "Back Lamp Operation" (page 16).



IMPORTANT!

- Charging is not performed while the connected computer is in the hibernate mode.
- A charging error can occur immediately after charging begins or some time after charging begins. A charging error is indicated by the back lamp flashing red.
- If low supply capacity exists due to your computer model or connection conditions, charging will start without the camera turning on. Turning on the camera in this case will cause charging to stop and enter USB data communication between the camera and the computer. The camera's back lamp will be lit green at this time.

Other Charging Precautions

- With the two charging methods described above, you can charge the camera's battery (NP-120) without removing it from the camera. You also can charge the battery using an optionally available charger unit (BC-120L). Never use any other type of charger device. Attempting to use a different charger can result in unexpected accident.
- A battery that is still warm immediately after normal use may not charge fully. Give the battery time to cool before charging it.
- A battery discharges slightly even when it is not loaded in the camera. Because of this, it is recommended that you charge the battery immediately before you need to use it.
- Charging the camera's battery may cause interference with TV and radio reception. If this happens, plug the USB-AC adaptor into an outlet that is further away from the TV or radio.
- Actual charging time depends on current battery capacity and charging conditions.
- Do not use the USB-AC adaptor with any other device.

Checking Remaining Battery Power

As battery power is consumed, a battery indicator on the monitor screen indicates remaining power as shown below.

Remaining Power	High ←————→ Low
Battery Indicator	 →  →  → 
Indicator Color	Cyan → Yellow → Red → Red

 indicates battery power is low. Charge the battery as soon as possible.

Recording is not possible when  is indicated. Charge the battery immediately.

- The level shown by the battery indicator may change when you switch between the REC mode and PLAY mode.
- Leaving the camera for about 30 days with no power supplied while the battery is dead will cause its date and time settings to be cleared. A message telling you to configure time and date settings will appear the next time you turn on the camera after restoring power. When this happens, configure date and time settings (page 87).
- See page 116 for information about battery life and number of shots.

Battery Power Conservation Tips

- When you do not need to use the flash, select  (Flash Off) for the flash setting (page 33).
- Enable the Auto Power Off and the Sleep features to protect against wasting battery power when you forget to turn off the camera (pages 89, 89).

Configuring Basic Settings the First Time You Turn On the Camera

The first time you turn on the camera, a screen appears for configuring the display language, date, and time settings. Failure to set the date and time correctly will cause the wrong date and time data to be recorded with images.

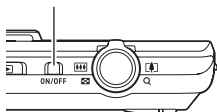


IMPORTANT!

- A screen for language selection will not appear in step 2 of the procedure below if you purchased a camera intended for the Japanese market. To change the display language from Japanese in this case, use the procedure under “Specifying the Display Language (Language)” (page 88). Note that a version of this manual in the language you select may not be included with a camera intended for the Japanese market.
- Camera models sold in certain geographic areas may not support display language selection.

1. Press [ON/OFF] (Power) to turn on the camera.

[ON/OFF] (Power)



2. Drag (page 13) upwards and downwards until you find the language you want, and then touch to select it.

3. Touch the date display format you want.

Example: July 10, 2012

YY/MM/DD → 12/7/10

DD/MM/YY → 10/7/12

MM/DD/YY → 7/10/12

4. Touch the value you want to change (year, month, day, hour, minute).

5. Touch “▲” or “▼” to change the currently selected value.

- Touching and holding “▲” or “▼” will change the setting at high speed.
- To switch between 12-hour and 24-hour format, touch the 12/24 hour switch icon.



12/24 hour switch icon

6. When the date and time settings are the way you want, touch “OK”.

If you make a mistake configuring display language, date, or time settings with the above procedure, refer to the following pages for information about how to correct the settings.

- Display language: Page 88
- Date and time: Page 87

NOTE

- Each country controls its local time offset and the use of summer time, and so they are subject to change.
- Removing the battery from the camera too soon after configuring time and date settings for the first time can cause the settings to be reset to their factory defaults. Do not remove the battery for at least 24 hours after configuring settings.

Preparing a Memory Card

Though the camera has built-in memory that can be used to store images and movies, you probably will want to purchase a commercially available memory card for greater capacity. The camera does not come with a memory card. Images recorded while a memory card is loaded are saved to the memory card. When no memory card is loaded, images are saved to built-in memory.

- For information about memory card capacities, see page 113.

Supported Memory Cards

- SD Memory Card (Up to 2GB)
- SDHC Memory Card (2GB to 32GB)
- SDXC Memory Card (32GB to 2TB)



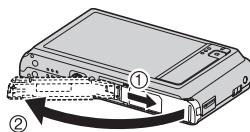
Use one of the above types of memory card.

- The above are supported memory card types as of June 2011.
- Noted memory card capacities are standard values.
- Use only SD cards that are compliant with the SD Card Association specification.
- This camera supports use of Eye-Fi cards.

To load a memory card

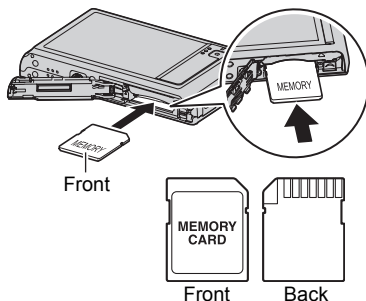
1. Press [ON/OFF] (Power) to turn off the camera and then open the battery cover.

Pressing the battery cover, slide it in the direction indicated by the arrow.



2. Load a memory card.

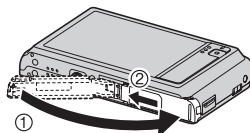
Positioning the memory card so its front is facing upwards (towards the monitor screen side of the camera), slide it into the card slot all the way in until you hear it click securely into place.



3. Close the battery cover.

Pressing the battery cover against the camera, slide it closed.

- For information about how to replace the memory card, see page 101.



IMPORTANT!

- Never insert anything besides a supported memory card (page 21) into the memory card slot.
- Should water or any foreign object ever get into the card slot, immediately turn off the camera, remove the battery, and contact your retailer or nearest CASIO authorized service center.

To format (initialize) a new memory card

You need to format a new memory card before using it for the first time.

1. Load a memory card (page 22).

2. Turn on the camera and then touch “MENU”.

- If “MENU” is not displayed on the screen, touch the tab to display it (page 32).
-

3. Drag (page 13) upwards and downwards until you find “Setup”, and then touch it.

4. Drag upwards and downwards until you find “Format”, and then touch it.

5. Touch “Format” and then touch “Yes”.

This starts the memory card format operation.

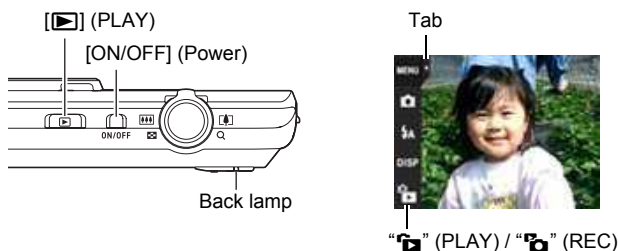


IMPORTANT!

- Formatting a memory card that already has snapshots or other files on it, will delete its contents. Normally you do not need to format a memory card again. However, if storing to a card has slowed down or if you notice any other abnormality, re-format the card.
- Be sure to use the camera to format a memory card. Formatting a memory card on a computer and then using it in the camera can slow down data processing by the camera. In the case of an SD, SDHC, or SDXC memory card, formatting on a computer can result in non-conformity with the SD format, causing problems with compatibility, operation, etc.
- Before formatting a new Eye-Fi card to use it for the first time, copy the Eye-Fi Manager install files to your computer. Do this before formatting the card.
- Before formatting an Eye-Fi card, be sure to back up any data on it that you want to keep.

Turning Power On and Off

■ To turn on the camera



To turn on power and enter the REC mode	Press [ON/OFF] (Power). • The back lamp will light green momentarily and the lens will extend out of the camera (page 27).
To turn on power and enter the PLAY mode	Press [PLAY] (PLAY). • The back lamp will light green momentarily and an image currently stored in camera memory will appear on the monitor screen (page 29).

- Take care to ensure that nothing is restricting or coming into contact with the lens as it extends. Holding the lens with your hand so it cannot extend creates the risk of malfunction.
- The Sleep function or Auto Power Off (pages 89, 89) will turn off power automatically if you do not perform any operation for a preset amount of time.

Entering the REC Mode and PLAY Mode

To enter the PLAY mode	In the REC mode, press [PLAY] (PLAY), or touch the tab and then touch the "PLAY" (PLAY) icon that appears.
To enter the REC mode	In the PLAY mode, press [PLAY] (PLAY), or touch the tab and then touch the "REC" (REC) icon that appears.

- About 10 seconds after you enter the PLAY mode from the REC mode, the lens will retract into the camera.

■ To turn off the camera

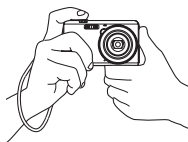
Press [ON/OFF] (Power).

Holding the Camera Correctly

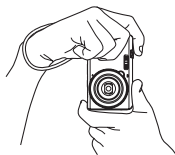
Your images will not come out clearly if you move the camera when you press the shutter button. When pressing the shutter button, be sure to hold the camera as shown in the illustration below, and keep it still by pressing your arms firmly against your sides as you shoot.

Holding the camera still, carefully press the shutter button and take care to avoid all movement as the shutter releases and for a few moments after it releases. This is especially important when available lighting is low, which slows down the shutter speed.

Horizontal



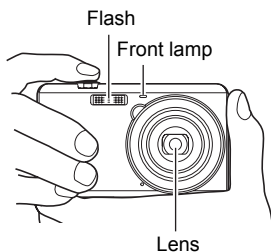
Vertical



Hold the camera so the flash is above the lens.

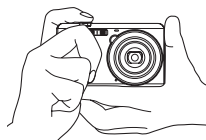
NOTE

- Take care that your fingers and the strap do not cover any of the areas indicated in the illustration.
- To protect against accidentally dropping the camera, attach the wrist strap and make sure it is around your fingers or wrist while you are operating the camera.
- Never swing the camera around by its strap.
- The supplied strap is intended for use with this camera only. Never use it for any other purpose.



IMPORTANT!

- Take care to ensure that your fingers are not blocking or are not too close to the flash. Fingers can cause unwanted shadows when using the flash.



To Shoot a Snapshot

Your camera has a variety of different recording modes to suit various shooting conditions and objectives (page 33). This section explains general shooting procedures using the auto recording mode.

Selecting an Auto Recording Mode

You can select one of two recording modes (Auto or BEST SHOT) according to your digital imaging needs.

 Auto	This is the standard Auto recording mode.
 BEST SHOT	With BEST SHOT, simply select the sample scene that resembles the type of shot you want, and the camera automatically configures ideal settings for the subject and shooting conditions (page 39).

1. Press [ON/OFF] (Power) to turn on the camera.

2. Touch the second icon from the top (Recording mode).

If the icon is not displayed on the screen, touch the tab to display it.



Recording mode icon

3. Touch “Auto” to select the auto recording mode.



To shoot a snapshot

1. Point the camera at the subject.

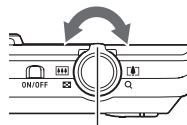
- You can zoom the image, if you want.



Wide Angle



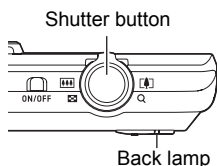
Telephoto



Zoom controller

2. Half-press the shutter button to focus the image.

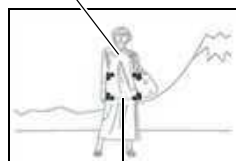
When focus is complete, the camera will beep, the back lamp will light green, and the focus frame will turn green.



Shutter button

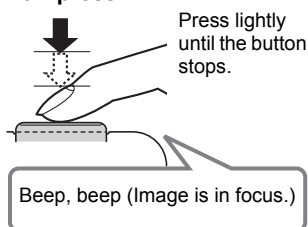
Back lamp

Subject to be focused on



Focus frame

Half-press

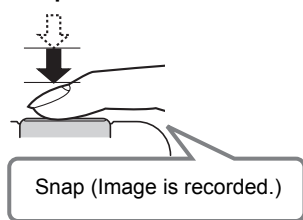


When you half-press the shutter button, the camera automatically adjusts exposure and focuses on the subject it is currently pointed at. Mastering how much pressure is required for a half-press and a full-press of the shutter button is an important technique for good-looking images.

3. Continuing to keep the camera still, press the shutter button the rest of the way down.

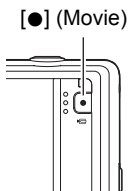
This records the snapshot.

Full-press



Recording a Movie

Press [●] (Movie) to start movie recording. Press [●] (Movie) again to stop movie recording. See page 37 for details.



NOTE

- You also can shoot a snapshot by touching a point on the monitor screen (page 42).
- You can specify the image size for snapshots. See page 45 for more information.

■ If the image does not focus...

If the focus frame stays red and the back lamp is flashing green, it means that the image is not in focus (because the subject is too close, etc.). Re-point the camera at the subject and try to focus again.

■ If the subject is not in the center of the frame...

"Focus lock" (page 44) is the name of a technique you can use when you want to shoot an image in which the subject to be focused on is not within the focus frame in the center of the screen.

Viewing Snapshots

Use the following procedure to view snapshots on the camera's monitor screen.

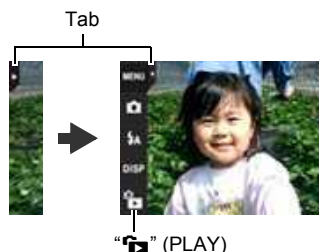
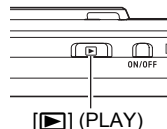
- For information about how to play back movies, see page 53.

1. Press **[▶]** (PLAY) or touch “**▶**” (PLAY) to enter the PLAY mode.

This will display one of the snapshots currently stored in memory.

- If “**▶**” (PLAY) is not displayed on the screen, touch the tab to display it.
- Information about the displayed snapshot also is included (page 9).
- You also can clear the information to view only the snapshot (page 10).
- You can zoom the screen image by sliding the zoom controller towards **[⬆]** or by touching the monitor screen (page 55).

If you are recording a snapshot that is very important to you, it is recommended that you zoom the image and check its details after recording it.



2. Drag left or right across the screen image to scroll through the snapshots.



NOTE

- Pressing the shutter button while in the PLAY mode or while a menu screen is displayed will switch directly to the REC mode.

Deleting Snapshots and Movies

If memory becomes full, you can delete snapshots and movies you no longer need in order to free up storage and record more images.



IMPORTANT!

- Remember that a file (image) delete operation cannot be undone.

To delete a single file

1. In the PLAY mode, drag left or right across the screen image to scroll through files until you find the one you want to delete.

2. Touch “”.

- If “” is not displayed on the screen, touch the tab to display it.

3. Touch “1 File”.

This will delete the selected image.



To delete all files

1. Enter the PLAY mode.

2. Touch “”.

- If “” is not displayed on the screen, touch the tab to display it.

3. Touch “All Files”.

4. Touch “Delete”.

This will cause the message “There are no files” to appear.

Snapshot Shooting Precautions

Operation

- Never open the battery cover while the back lamp is flashing green. Doing so can result in the image you just shot being saved incorrectly, damage to other images stored in memory, malfunction of the camera, etc.
- If unwanted light is shining directly onto the lens, shade the lens with your hand.

Monitor Screen when Shooting Snapshots

- Subject brightness conditions can cause monitor screen response to slow and can cause digital noise in the monitor screen image.
- The image that appears on the monitor screen is for image composition. The actual image will be recorded in accordance with the currently selected recording mode (page 33).

Shooting Indoors under Fluorescent Lighting

- Minute flickering of fluorescent lighting can affect the brightness or color of an image.

Auto Focus Restrictions

- Any of the following can make proper focus impossible.
 - Solid color wall or other very low contrast subject
 - Strongly back lit subject
 - Very shiny subject
 - Blinds or other subject with a repeating horizontal pattern
 - Multiple subjects at varying distances from the camera
 - Subject in a dark location
 - Camera movement while shooting
 - Fast-moving subject
 - Subjects outside the focus range of the camera
- If you cannot focus properly, try using focus lock (page 44) or Manual Focus (page 43).

Recording Images

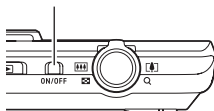
Touching the monitor screen in the REC mode will display a screen for configuring REC mode settings.

■ To configure REC mode settings

1. Press [ON/OFF] (Power) to turn on the camera and enter the REC mode.

- If the camera is in the PLAY mode, touch “” (REC) to enter the REC mode.

[ON/OFF] (Power)



“” (REC)

2. Touch the item whose setting you want to change.

- If there are no icons along the left side of the screen, touch the tab to display them.

- ① Tab (page 24)
- ② Menu (page 41)*
- ③ Recording mode (page 33)
- ④ Flash (page 33)
- ⑤ Information (page 10)
- ⑥ PLAY mode (page 24)



* Depending on the recording mode, some of the items on the menu that appears may not be usable.

Selecting a Recording Mode

Your camera has two modes: Auto mode and BEST SHOT mode.

1. In the REC mode, touch the second icon from the top (Recording mode).

- If the icon is not displayed on the screen, touch the tab to display it.

2. Touch the icon of the recording mode you want to use.

This enters the selected recording mode.

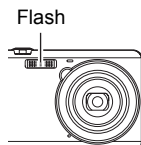


 Auto	Standard Auto recording mode. This is the mode normally used for shooting (page 26).
 BEST SHOT	With BEST SHOT, simply select the sample scene that resembles the type of shot you want, and the camera automatically configures ideal settings for the subject and shooting conditions (page 39).

Using Flash (Flash)

1. In the REC mode, touch the third icon from the top (Flash).

2. Touch the icon of the flash mode you want to use.



 Auto	Flash fires automatically in accordance with exposure (amount of light and brightness) conditions.
 Flash Off	Flash does not fire.
 Flash On	Flash always fires. This setting can be used to brighten a subject that normally comes out dark due to daylight or backlight (daylight synchro flash).
 Red Eye	Flash fires automatically. This type of flash can be used to reduce the chance of redness in the subject's eyes.

3. Press the shutter button to shoot.



Back lamp

Flashes orange while the flash is charging to indicate that image recording is disabled.

- You will not be able to take another flash snapshot until the lamp stops flashing orange, which indicates that charging is complete.

- For information about Flash Range, see page 115.

NOTE

- Take care so your fingers and the strap do not block the flash.
- The desired effect may not be obtained when the subject is too far away or too close.
- Flash charging time (page 115) depends on operating conditions (battery condition, ambient temperature, etc.)
- Shooting with flash turned off when lighting is dim results in a slow shutter speed, which can cause image blur due to camera movement. Under such conditions, secure the camera with a tripod, etc.
- With red eye reduction, the flash is fired automatically in accordance with exposure. It does not fire in areas where lighting is bright.
- The presence of outdoor sunlight, fluorescent lighting, or some other light source can cause abnormal image colors.
- Select  (Flash Off) for the flash setting when shooting in areas where flash photograph is prohibited.

Red-eye Reduction

Using the flash to shoot at night or in a dimly lit room can cause red spots inside the eyes of people who are in the image. This is caused when the light from the flash reflects off of the retina of the eye. When red-eye reduction is selected as the flash mode, the camera fires a pre-flash to cause the irises in the eyes of any people in the image to close, which reduces the chance of red eye.

Note the following important points when using red-eye reduction.

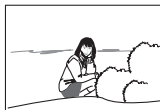
- Red-eye reduction does not work unless the people in the image are looking directly at the camera (flash).
- Red-eye reduction may not work very well if the subjects are located far away from the camera.

Shooting with Zoom

Your camera is equipped with various types of zoom: optical zoom, HD Zoom, and digital zoom. The maximum zoom factor depends on the image size setting.

Optical zoom	Changes the lens focal distance.
HD Zoom	Allows greater zoom capabilities by cutting out a portion of the original image and enlarging it.
Digital zoom	Digitally processes the center of the image to enlarge it.

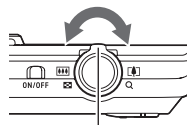
1. In the REC mode, slide the zoom controller to zoom.



 Wide Angle



 Telephoto



Zoom controller

 (Wide Angle): Reduces the size of the subject and broadens the range.

 (Telephoto) : Enlarges the subject and narrows the range.

2. Press the shutter button to shoot the image.



IMPORTANT!

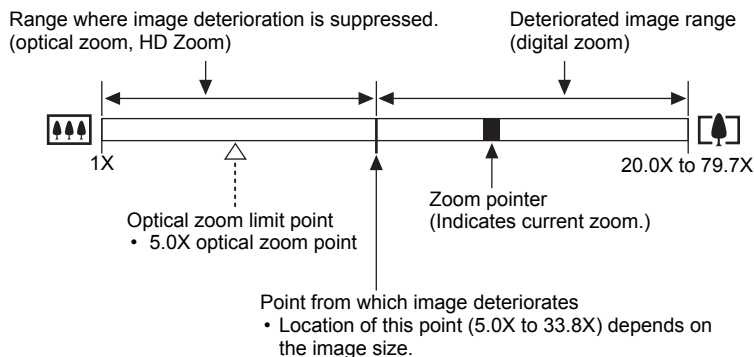
- Digital zoom and HD zoom are disabled while time stamping (page 86) is turned on.

NOTE

- Use of a tripod is recommended to protect against image blur due to camera movement when shooting with telephoto.
- Performing a zoom operation changes the lens aperture.

Interpreting the Zoom Bar

During a zoom operation, a zoom bar appears on the monitor screen to show the current zoom setting.



Zoom Icon

The appearance of the zoom icon on the monitor screen depends on the zoom factor.

Optical zoom	Not displayed
HD Zoom	Not displayed
Digital zoom	

Zoom Factor

The digital zoom factor depends on the image size (page 45).

Image size	Maximum zoom factor where image deterioration can be suppressed	Total maximum zoom factor
14M	5.0X	20.0X
3:2	5.0X	20.0X
10M	5.9X	23.7X
6M	7.7X	30.7X
3M	10.6X	42.2X
VGA	33.8X	79.7X

To record a movie

The following procedure explains how to record a movie.

"MENU"

1. In the REC mode, touch "MENU".

- If "MENU" is not displayed on the screen, touch the tab to display it.



2. Drag upwards and downwards until you find "Movie Quality", and then touch to select it.

3. Touch the item whose setting you want to change.

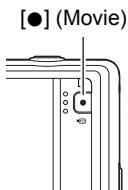
Movie Quality	Frame Rate	Image Size (Pixels)	Description
HD	30fps	1280×720	Select this setting to record high-definition (HD) movies. The aspect ratio of movies recorded with this setting is 16:9.
STD	30fps	640×480	Select this setting to record standard movies.

4. To close the menu screen, touch "MENU" or press the shutter button.

5. Press [●] (Movie).

This will start recording.

- Monaural audio is also recorded during movie recording.
- Immediately after you press [●] (Movie), the camera will focus automatically on the subject in the center of the monitor screen. After this, focus is fixed while movie recording is in progress.
- Touching "⌚" while recording is in progress will cause the remaining recording time and "R" to appear. Touch "⌚" again to switch back to the elapsed recording time.



Recording time/
Remaining recording time



6. Press [●] (Movie) again to stop recording.

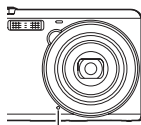
Movie recording also will stop automatically if memory becomes full before you press [●] (Movie).

- The maximum allowed for a single movie recording is 4 GB in file size or 29 minutes in length. Movie recording stops automatically when either of these limits is reached.



IMPORTANT!

- Spending a long time using movie recording will cause the camera to become slightly warm to the touch. This is normal and does not indicate malfunction.
- The camera also records audio. Note the following points when shooting a movie.
 - Take care that the microphone is not blocked by your fingers, etc.
 - Good audio recording results are not possible when the camera is too far away from what you are trying to record.
- Shooting a very bright subject can cause a vertical band or a pink cast on the monitor screen image. This does not indicate malfunction.
- Shooting a movie using the camera's built-in memory will cause movie frames to be dropped. Always use a high speed memory card (not built-in memory) for movie recording.
- Only digital zoom can be used for zooming during movie recording. Since optical zoom is not possible while recording a movie, zoom as required before pressing **[●]** (Movie) to start recording.
- Use of certain types of memory cards slows down data transfer and increases the time it takes to record movie data, which can result in movie frames being dropped. The movie icon turns yellow to indicate that frames are being dropped. In order to avoid problems such as these, use of an Ultra High Speed Type SD memory card is recommended. Note, however that CASIO makes no guarantees about the operation of any Ultra High Speed Type SD memory card used with this camera.



Microphone

NOTE

- The effects of camera movement in an image become more pronounced when you shoot close up or with a large zoom factor. Because of this, use of a tripod is recommended under these conditions.

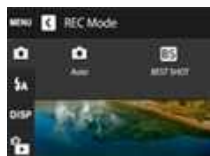
Using BEST SHOT

BEST SHOT provides you with a collection of sample “scenes” that show a variety of different types of shooting conditions. When you need to change the setup of the camera, simply find the scene that matches what you are trying to achieve, and the camera sets up for it automatically. This helps to minimize the chance of ruined images due to poor exposure and shutter speed settings.

■ To shoot an image with BEST SHOT

1. In the REC mode, touch the second icon from the top (Recording mode).

- If the icon is not displayed on the screen, touch the tab to display it.



2. Touch “BS” (BEST SHOT).

This will display a menu of BEST SHOT scenes.



3. Touch the scene you want to select.

- Touching “i” in the upper right corner of the screen and then touching a BEST SHOT scene will display detailed information about the scene.

4. Press the shutter button (if you are shooting a snapshot) or press [●] (Movie) (if you are shooting a movie).

NOTE

- The BEST SHOT YouTube scene sets up the camera for recording movies that are optimized for uploading to YouTube. Movies recorded with the YouTube scene are stored in a special folder to make them easy to locate for uploading (page 81).

■ BEST SHOT Precautions

- For YouTube scene cannot be used while shooting a snapshot.
- Your camera includes a sample scene that optimizes settings for auction site images. Depending on your camera model, the sample scene is named either "For eBay" or "Auction". Images you record using the auction site sample scene are stored in a special folder so you can easily find them on your computer (page 81).
- High Sensitivity
 - The high sensitivity setting is disabled whenever the camera's flash fires.
 - High sensitivity may not produce the desired results in very dark conditions.
 - When shooting with slow shutter speeds, use a tripod to protect against blurring due to camera movement.
 - Under certain lighting conditions, the camera will perform an automatic noise filtering operation to reduce digital noise in the image. This operation causes the camera to take longer than normal to save the image and be ready for the next shot.
- BEST SHOT scene images were not shot using this camera.
- Images shot using a BEST SHOT scene may not produce the results you expected due to shooting conditions and other factors.
- You can modify the camera settings that are configured after you select a BEST SHOT scene. Note, however, that the BEST SHOT settings revert to their defaults when you select another BEST SHOT scene or turn off the camera.
- Some scenes like Night Scene results in a slow shutter speed setting. Since a slow shutter speed increases the chance of digital noise in the image, the camera automatically performs a digital noise reduction process when either of these scenes is selected. This means that it will take a bit longer for the image to be saved which is indicated by the back lamp flashing green. Do not perform any operation during that time. Also, it is a good idea to use a tripod to avoid image blur due to camera movement when shooting at slow shutter speeds.

Advanced Recording Settings

The following are menu operations you can use to configure various camera settings.

Using the REC Menu

■ Example Menu Screen Operation

1. In the REC mode, touch “MENU”.

This will display the menu screen.

- If “MENU” is not displayed on the screen, touch the tab to display it.
- Menu contents are different in the REC mode and PLAY mode.



2. Drag upwards and downwards until you find the item whose setting you want to change.

3. Touch the item.

4. Configure the setting of the item in accordance with the screen contents.

- To cancel and exit the menu, touch “MENU” or press the shutter button.

■ Menu Operations in This Manual

Menu operations are represented in this manual as shown below. Touch the indicated icons and items, and perform operations as they are indicated, from left to right.

Procedure

Enter the REC Mode → MENU → Touch Shutter

Using Touch Shutter (Touch Shutter)

Procedure

Enter the REC Mode → MENU → Touch Shutter

You can use the procedure below to shoot a snapshot.

1. Touch “On”.

2. Point the camera at the subject.

3. When you want to shoot, touch the monitor screen.

The camera automatically comes into focus and then shoots.

- You can still use the shutter button to shoot even when “On” is selected for Touch Shutter.

NOTE

- When “Face Detection” is on, the camera will focus on the detected face.

Using the Self-timer (Self-timer)

Procedure

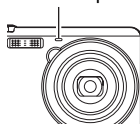
Enter the REC Mode → MENU → Self-timer

With the Self-timer, pressing the shutter button starts a timer. The shutter is released and the image is shot after a fixed amount of time.

10 sec	10-second Self-timer
2 sec	2-second Self-timer • When shooting under conditions that slow down the shutter speed, you can use this setting to prevent image blur due to camera movement.
Off	Self-timer is disabled.

- The front lamp flashes while the Self-timer countdown is in progress.
- You can interrupt an ongoing Self-timer countdown by pressing the shutter button.

Front lamp



NOTE

- The Self-timer cannot be used together with the following features.
Some BEST SHOT scenes

Selecting a Focus Mode (Focus)

Procedure

Enter the REC Mode → MENU → Focus

Changing to a different focus mode can help to achieve better focus.

Settings	Type of Shot	Focus Mode		Approximate Focus Range* ¹	
		Snapshot	Movies	Snapshot	Movies
 AF (Auto Focus)	General recording	Automatic	Fixed* ²	Approximately 10 cm to ∞ (infinity) (3.9" to ∞) (Wide Angle)	Fixed distance* ²
 Macro	Close ups	Automatic		Approximately 10 cm to 50 cm (3.9" to 19.7") (Wide Angle)	
 Infinity	Scenery and other distant subjects	Fixed		Infinity	
 MF (Manual Focus)	When you want to focus manually	Manual		Approximately 10 cm to ∞ (infinity)* ² (3.9" to ∞) (Wide Angle)	

*¹ The focus range is the distance from the lens surface.

*² Immediately after you press  (Movie), the camera will focus automatically on the subject in the center of the monitor screen. After this, focus is fixed while movie recording is in progress.

To focus with manual focus

1. On the monitor screen, compose the image so the subject you want to focus on is within the yellow boundary.

2. Touch “MF”.

3. Watching the image on the monitor screen, touch “+” (closer) or “-” (further) to adjust focus.

- At this time the image that is within the boundary will enlarge and fill the monitor screen, which aids in focusing. The camera will return to the screen in step 1 if you do not perform any operation for about three seconds.



NOTE

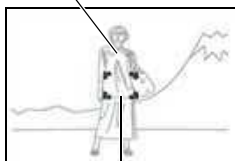
- An Auto Macro feature detects how far the subject is from the lens and automatically selects either Macro Focus or Auto Focus accordingly.
- Auto Focus is the only focus mode available while face detection is enabled. To select another focus mode, first turn off face detection (page 47).
- Use of the flash together with Macro Focus can cause the light of the flash to become blocked, which may result in unwanted lens shadows in your image.

Using Focus Lock

“Focus lock” is a technique you can use when you want to compose an image in which the subject you want to focus on is not within the focus frame in the center of the screen.

1. Align the monitor screen’s focus frame with the subject you want to focus on and then half-press the shutter button.

Subject to be focused on



Focus frame

2. Keeping the shutter button half-pressed (which maintains the focus setting), move the camera to compose the image.

3. When you are ready to shoot the image, press the shutter button the rest of the way down.



NOTE

- Focus lock also locks exposure (AE).
- The focus frame does not appear on the display when the Touch Shutter is enabled (On).

Changing the Image Size (Image Size)

Procedure

Enter the REC Mode → MENU → Image Size

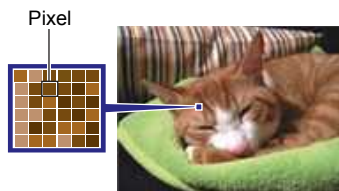
This setting can be used to configure snapshot image size.

Image Size (Pixels)	Suggested Print Size and Application	Description
14M (4320×3240)	Poster Print	Good detail for better clarity even for images cropped (page 61) from the original
3:2 (4320×2880)	Poster Print	
10M (3648×2736)	Poster Print	Good detail
6M (2816×2112)	A3 Print	
3M (2048×1536)	3.5"×5" Print	Best when preserving memory capacity is relatively more important than image quality.
VGA (640×480)	E Mail	Image files are smaller, which is better when attaching images to e-mail. However, images are relatively coarser.

- The initial factory default image size setting is 14M (14 million pixels).
- Selecting "3:2" records images with an aspect ratio of 3:2, which matches the standard aspect ratio of print paper.
- You should regard the print paper sizes suggested here as guidelines only (200 dpi print resolution).

■ Pixels

A digital camera image is a collection of small dots called “pixels”. The more pixels there are in an image, the more detail there will be. However, you generally can do with fewer pixels when printing an image (L size) through a print service, attaching an image to e-mail, when viewing the image on a computer, etc.



■ About image sizes

The size of an image indicates how many pixels it contains, and is expressed as horizontal pixels×vertical pixels.

14M (4320×3240) size image = Approximately 14 million pixels	
VGA (640×480) size image = Approximately 300,000 pixels	

* Unit: pixels

Image Size Selection Tips

Note that larger images have more pixels, so they take up more memory space.

Large Number of Pixels	More detail, but takes up more memory. Best when you plan to print large-size prints (such as A3 size).	
Small Number of Pixels	Less detail, but takes up less memory. Best when you want to send images by e-mail, etc.	

- For information about image size and number of images that can be stored, see page 113.
- For information about movie image size, see page 37.
- For information about resizing existing snapshots, see page 60.

Movie Image Quality Settings (Movie Quality)

Procedure

Enter the REC Mode → MENU → Movie Quality

See page 37 for details.

Using Face Detection (Face Detection)

Procedure

Enter the REC Mode → MENU → Face Detection

When shooting people, the face detection feature detects the faces of up to ten individuals and adjusts focus and brightness accordingly.

1. Touch “On”.

2. Touch “”.

3. Point the camera at the subject(s).

The camera will detect human faces and display a frame around each one.

4. Half-press the shutter button.

The camera will focus and the frames around the faces it focuses on will turn green.



5. Press the shutter button the rest of the way down.

IMPORTANT!

- The camera performs center focus if it cannot detect a face.
- The only focus mode available while face detection is enabled is Auto Focus (AF).
- Face detection may take a bit longer when you hold the camera sideways.
- Detection of the following types of faces is not supported.
 - Face that is obstructed by hair, sunglasses, a hat, etc., or a face in dark shade
 - A profile or a face that is at an angle
 - A face that is very far away and small, or very close and large
 - A face in an area that is very dark
 - The face of a pet or some other non-human subject
- Face detection cannot be used in combination with any of the following features.
 - Some BEST SHOT scenes
 - Movie Recording

Correcting Image Brightness (EV Shift)

Procedure

Enter the REC Mode → MENU → EV Shift

You can manually adjust an image's exposure value (EV value) before shooting it.

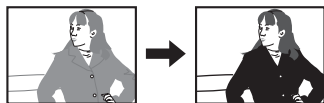
- Exposure Compensation Range: -2.0 EV to +2.0 EV
- Unit: 1/3 EV

1. Touch a level you want to set.

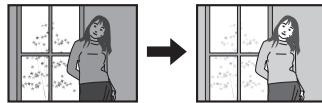
- To cancel exposure compensation, change the EV value to 0.0.



Decreases the EV value. A lower EV value is best for dark-color subjects and for shooting outdoors on a clear day.



Increases the EV value. A higher EV value is best for light-colored subjects and backlit subjects.



2. Touch "OK".

This applies the exposure compensation value. The exposure compensation value you set remains in effect until you change it or turn off the camera (which causes it to revert to "0.0").

NOTE

- When shooting under very dark or very bright conditions, you may not be able to obtain satisfactory results even after performing exposure compensation.

Adjusting White Balance (White Balance)

Procedure

Enter the REC Mode → MENU → White Balance

You can adjust white balance to match the source of light available where you are shooting and avoid the blue cast that results when shooting outdoors when it is cloudy, and the green cast that results when shooting under fluorescent lighting.

1. Touch the type of white balance you want to select.

You can see the affect of the white balance setting you select on the monitor screen.

 Auto WB	Configures the camera to adjust white balance automatically
 Daylight	For shooting outdoors on a clear day
 Overcast	For shooting outdoors on an overcast rainy day, in the shade, etc.
 Shade	For shooting on a clear day in the shade of trees or buildings
 DayWhite Fluor	For shooting under white or day white fluorescent lighting
 Daylight Fluor	For shooting under daylight fluorescent lighting
 Tungsten	For shooting under light bulb lighting
 Manual WB	For configuring the camera manually to suit a particular light source. ① Touch “ Manual WB”. ② In the location where you plan to shoot, point the camera at a blank white piece of paper so it fills the entire monitor screen. ③ Touch an area of the screen where no icon is located. The white balance setting is retained even if you turn off the camera. 

- When “ Auto WB” is selected for the white balance setting, the camera automatically determines the white point of the subject. Certain subject colors and light source conditions can cause problems when the camera tries to determine the white point, which makes proper white balance adjustment impossible. If this happens, select the white balance setting that matches your shooting conditions (Daylight, Overcast, etc.).

2. Touch “OK”.

Specifying ISO Sensitivity (ISO)

Procedure

Enter the REC Mode → MENU → ISO

ISO sensitivity is a measure of sensitivity to light.

AUTO	Adjusts sensitivity automatically according to conditions		
ISO 64	Lower sensitivity  Higher sensitivity	Slow shutter speed  Fast shutter speed (Set for shooting in dimly lit areas.)	Less noise  Some coarseness (increased digital noise)
ISO 100			
ISO 200			
ISO 400			
ISO 800			
ISO 1600			

- Higher ISO sensitivity values tend to result in digital noise in images.
- Since higher ISO sensitivity values tend to result in digital noise in images, the camera performs a noise filtering process. Because of this, it may take relatively longer for the camera to finish recording an image after it is shot. You will not be able to perform any operation while image recording is in progress.

Optimizing Image Brightness (Lighting)

Procedure

Enter the REC Mode → MENU → Lighting

You can use this setting to optimize the balance between bright areas and dark areas when shooting images.

On	Performs brightness correction.
Off	Does not perform brightness correction.

Using Built-in Color Filters (Color Filter)

Procedure

Enter the REC Mode → MENU → Color Filter

Settings: Off, B/W, Sepia, Red, Green, Blue, Yellow, Pink, and Purple

Reducing the Effects of Camera and Subject Movement (Anti Shake)

Procedure

Enter the REC Mode → MENU → Anti Shake

You can turn on the camera's Anti Shake feature to reduce image blur due to subject movement or camera movement when shooting a moving subject using telephoto, when shooting a fast-moving subject, or when shooting under dim lighting conditions.

On	Minimizes the effects of hand and subject movement.
Off	Turns off Anti Shake settings

NOTE

- ISO sensitivity, aperture, and shutter speed do not appear on the monitor screen when you half-press the shutter button while "On" is selected. These values will appear briefly, however, in the preview image that is displayed immediately after you shoot a snapshot.
- If the flash fires, the Anti Shake icon  will remain on the display, even though Anti Shake does not function during flash photography.
- The ISO sensitivity setting (page 50) must be "Auto" for Anti Shake to work.
- Shooting with Anti Shake can cause an image to appear somewhat coarser than normal and can cause slight deterioration of image resolution.
- Anti Shake may not be able to eliminate the effects of camera or subject movement when movement is severe.
- Anti Shake is disabled during movie recording.

Displaying the On-screen Grid (Grid)

Procedure

Enter the REC Mode → MENU → Grid

The on-screen grid can be displayed on the REC mode monitor screen for easy vertical and horizontal alignment when composing images.



Configuring Power On Default Settings (Memory)

Procedure

Enter the REC Mode → MENU → Memory

When you turn off the camera, it remembers the current settings of all enabled memory items and restores them when you turn it back on. Any memory item that is disabled will be returned to its initial default setting whenever you turn off the camera.

Setting	On (Initial Default Setting)	Off
BEST SHOT	Snapshot (Auto)	Setting at power off
Touch Shutter	On	
Flash	Auto	
Self-timer	Off	
White Balance	Auto	
ISO	Auto	
Focus	AF (Auto Focus)	
MF Position	Position before manual focus was selected.	
Zoom Position*	Full wide	

* Optical zoom setting only.

- If you turn the camera power off and then back on while the BEST SHOT memory item is enabled, all of the other memory items (except for zoom position) are initialized to the currently selected BEST SHOT sample scene setup, regardless of the enabled/disabled status of the other memory items.

Viewing Snapshots and Movies

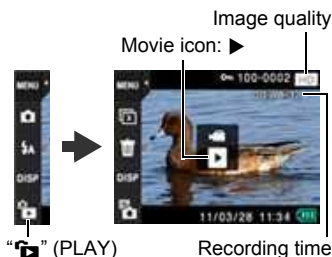
Viewing Snapshots

See page 29 for the procedure for viewing snapshots.

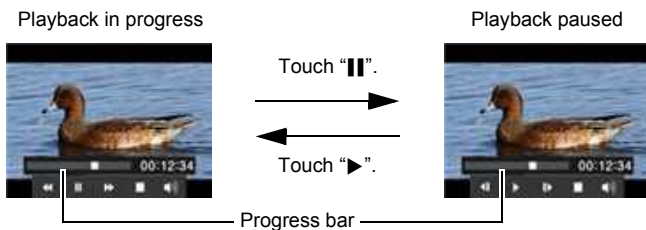
Viewing a Movie

1. Press [▶] (PLAY) or touch “▶” (PLAY) to enter the PLAY mode.
 - If “▶” (PLAY) is not displayed on the screen, touch the tab to display it.

2. Drag left or right across the screen image to scroll through the movies until the one you want is displayed.



3. Touch “▶” (Movie) to start playback.



Movie Playback Controls

Pause/Play	Touch “⏏” (pause) or “▶” (play).
Fast forward/ Fast reverse	During playback, touch “◀◀” (fast reverse) or “▶▶” (fast forward). - Each touch of either button increases the speed of the fast forward or fast reverse operation. - To return to normal playback speed, touch “▶”.
Stop playback	During playback, touch “■”.
Volume adjustment	During playback, touch “🔊” and then drag the volume bar to the desired level.
1 frame forward/ back	While playback is paused, touch “▶” or “◀”. Touching and holding this icon advances frames continuously.
Information display on/off	Touch the screen.

- Playback may not be possible for movies not recorded with this camera.

Playing a Slideshow on the Camera (Slideshow)

You can use the slideshow mode to automatically scroll through all of the images in camera memory.

1. In the **PLAY** mode, touch “🖼️” for the playback mode.

This will start the slideshow.

- If “🖼️” is not displayed on the screen, touch the tab to display it.



NOTE

- All operations are disabled while the slideshow is transitioning from one image to another.
- The time required for transition from one image to another may be longer in the case of an image that was not recorded with this camera.
- To return to normal (single image) display, touch the monitor screen.

Viewing the Image Menu

The image menu shows multiple images on a single screen.

1. In the PLAY mode, slide the zoom controller towards (.

This displays the image menu.

- Drag upwards or downwards to scroll to the next page of images.
- To view the normal (single image) display mode, touch the image you want to view.
- In the case of a movie, the first image in the movie is displayed.



Zooming an On-screen Image

Snapshots can be zoomed on the monitor screen up to 8X.

- The actual available zoom factors depend on the size of the original image.

1. In the PLAY mode, drag left or right to display the image you want to view.

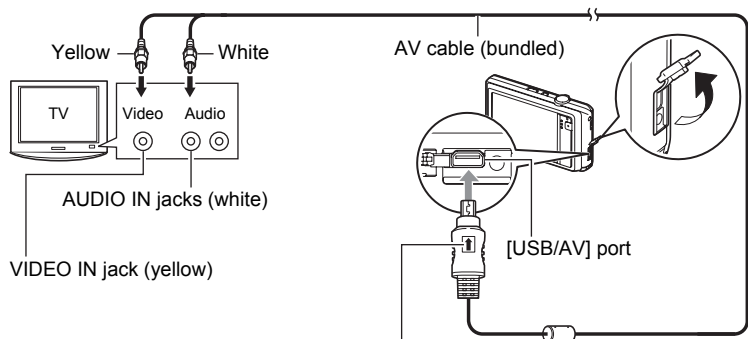
2. Slide the zoom controller towards (to zoom.

- Dragging an enlarged screen image will change the part of the image that is displayed.
 - When monitor screen contents are turned on, a graphic in the lower right corner of the screen shows what part of the zoomed image is currently displayed.
- To return to normal (single image) display, slide the zoom controller towards  (.



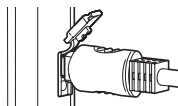
Viewing Snapshots and Movies on a TV Screen

1. Use the AV cable that comes with the camera to connect it to the TV.



Making sure that the ↑ mark on the AV cable connector is towards the lens side, connect the cable to the camera.

- Make sure that you insert the cable connector into the USB/AV port until you feel it click securely into place. Failure to insert the connector fully can result in poor communication or malfunction.
- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.



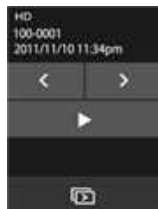
2. Turn on the TV and select its video input mode.

If the TV has more than one video input, select the one where the camera is connected.

3. Press [▶] (PLAY) to turn on the camera.

This will cause an image to appear on the TV screen.

- You also can change the aspect ratio of the screen and the video output system (page 90).
- The contents of the remote controller image will depend on the type of image that is displayed on the TV screen.



4. Touch the camera monitor screen to perform operations.

NOTE

- Audio is monaural.
- Audio is initially output by the camera at maximum volume. When you first start displaying images, set the TV volume control at a relatively low level and then adjust it as required.

Recording Camera Images to a DVD Recorder or Video Deck

Use one of the following methods to connect the camera to the recording device using the camera's bundled AV cable.

- DVD recorder or video deck: Connect to the VIDEO IN and AUDIO IN terminals.
- Camera: USB/AV port

You can play a slideshow of snapshots and movies on the camera and record it on a DVD or video tape.

For information about connecting a monitor to the recording device and about how to record, see the user documentation that comes with the recording device you are using.

Other Playback Functions (PLAY)

The following are menu operations you can use to configure various camera settings.

Using the PLAY Menu

■ Example Menu Screen Operation

1. In the PLAY mode, touch “MENU”.

This will display the menu screen.

- If “MENU” is not displayed on the screen, touch the tab to display it.
- Menu contents are different in the REC mode and PLAY mode.



2. Touch the item whose setting you want to change.

3. Configure the setting of the item in accordance with the screen contents.

- To cancel and exit the menu, touch “MENU” or press the shutter button.

■ Menu Operations in This Manual

Menu operations are represented in this manual as shown below. Touch the indicated icons and items, and perform operations as they are indicated, from left to right.

Procedure

Enter the PLAY Mode → MENU → Protect

Rotating an Image (Rotation)

Procedure

Enter the **PLAY Mode** → **MENU** → **Rotation**

1. Drag upwards or downwards to display the image you want to rotate.
2. Touch “Rotate”.
This will rotate the image 90 degrees to the left.
3. When the image is in the orientation you want, touch “”.

NOTE

- Note that this procedure does not actually change the image data. It simply alters how the image is displayed on the camera's monitor screen.
- An image that has been protected or zoomed cannot be rotated.

Selecting Images for Printing (DPOF Printing)

Procedure

Enter the **PLAY Mode** → **MENU** → **DPOF Printing**

See page 63 for details.

Protecting a File Against Deletion (Protect)

Procedure

Enter the **PLAY Mode** → **MENU** → **Protect**

You can protect images to prevent them from being deleted.

- A protected image will be indicated by “”.



All Files On	Protects all files.
All Files Off	Unprotects all files.
Select	Protects and unprotects specific files. ① Drag upwards or downwards to display the image you want to protect. ② Touch an image to be protected, and “” will appear on the image. You can repeat steps ① and ② as many times as necessary to select multiple images. ③ Touch “OK”. To unprotect an image, touch it in step ② of the above procedure to remove “”.



IMPORTANT!

- Note that even if a file is protected, it will be deleted if you perform the format operation (page 90).

Resizing a Snapshot (Resize)

Procedure

Enter the PLAY Mode → MENU → Resize

You can reduce the size of a snapshot and save the result as a separate snapshot. The original snapshot is also retained. You can select resize an image to one of three image sizes: 5M, 3M, VGA.

1. Drag left or right to display the image you want to resize.

2. Touch a size.

This resizes the image to the selected size and saves the result as a new photograph.

NOTE

- Resizing a 3:2 size snapshot will create an image with an aspect ratio of 4:3, with both sides cut off.
- The recording date of the resized version of the snapshot will be the same as the recording date of the original snapshot.

Cropping a Snapshot (Trimming)

Procedure

Enter the PLAY Mode → MENU → Trimming

You can crop a snapshot to trim parts you do not need, and save the result in a separate file. The original snapshot is also retained.

1. Drag left or right to display the image you want to crop.

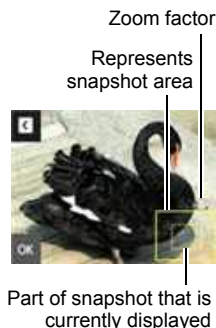
2. Touch “OK”.

3. Drag the image until the part you want to keep is displayed.

- You can use the zoom controller to enlarge or reduce the image size.

4. Touch “OK”.

This will crop the image, leaving only the displayed part.



NOTE

- The image produced by cropping a 3:2 image will have an aspect ratio of 4:3.
- The recording date of the cropped image will be the same as the recording date of the original snapshot.

Copying Files (Copy)

Procedure

Enter the **PLAY Mode** → **MENU** → **Copy**

Files can be copied from the camera's built-in memory to a memory card or from a memory card to built-in memory.

Built-in → Card	Copies all files from built-in camera memory to a memory card. This option copies all the files in built-in camera memory. It cannot be used to copy a single file.
Card → Built-in	Copies a single file on the memory card to built-in camera memory. Files are copied to the folder in built-in memory whose name has the largest serial number. ① Drag left or right to display the image you want to copy. ② Touch "Copy".

NOTE

- You can copy snapshots or movies, you recorded with this camera.

Printing Snapshots

Professional Print Service

You can take a memory card that contains the images you want to print to a professional print service and have them printed.



Printing on a Home Printer

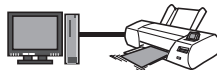
Printing Images on a Printer with Memory Card Slot

You can use a printer equipped with a memory card slot to print images directly from a memory card. For details, see the user documentation that comes with your printer.



Printing with a Computer

After transferring the images to your computer, use commercially available software to print.



- You can specify which images you want to print, the number of copies, and date stamp settings before printing (page 63).

Using DPOF to Specify Images to be Printed and the Number of Copies

■ Digital Print Order Format (DPOF)

DPOF is a standard that allows you to include image type, number of copy, and time stamp on/off information on the memory card with the images. After configuring settings, you can use the memory card to print on a home printer that supports DPOF or take the memory card to a professional print service.



- Whether or not you will be able to use DPOF settings for printing depends on the printer you are using.
- Some professional print services may not support DPOF.

■ Configuring DPOF Settings Individually for Each Image

Procedure

Enter the **PLAY Mode** → **MENU** → **DPOF Printing** → **Select images**

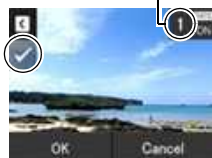
1. Drag left or right to display the image you want to print.

2. Touch the number of copies value.

3. Touch “<” or “>” to specify the number of copies.

You can specify a value up to 99. Specify 0 if you do not want to print the image.

Number of copies



4. Touch “OK”.

- Touch “DATE” to toggle it between “ON” (date printed) and “OFF” (date not printed). Toggling from “OFF” to “ON” automatically changes the number of copies value to 1.
- The images that will be printed are marked with a check mark (✓).
- Repeat steps from 1 to 4 to configure settings for other images, if you want.

5. Touch “OK”.

■ Configuring the Same DPOF Settings for All the Images

Procedure

Enter the **PLAY Mode** → **MENU** → **DPOF Printing** → **All images**

1. Touch “Date stamping”.

2. Touch “On” to turn date stamping on or “Off” to turn it off.

- Switching from “Off” to “On” automatically changes the number of copies value to 1.

3. Touch “<” or “>” to specify the number of prints.

You can specify a value up to 99. Specify 0 if you do not want to print the image.

4. Touch “OK”.

DPOF settings are not cleared automatically after printing is complete.

The next DPOF print operation you execute will be performed using the last DPOF settings you configured for the images. To clear DPOF settings, specify “0” for the number of copies of all images.

Tell your print service about your DPOF settings!

If you take a memory card to a professional print service, be sure to tell them that it includes DPOF settings for the images to be printed and the number of copies. If you don't, the print service may print all the images without regard to your DPOF settings, or they may ignore your date stamp setting.

■ Date Stamping

You can use one of the following three methods to include the recording date in the printout of an image.

Configuring camera settings
Configure DPOF settings (page 63). You can turn date stamping on and off each time you print. You can configure settings so some images include the date stamp and some don't.
Configure the Camera's Time Stamp setting (page 86). • The camera's Time Stamp setting imprints the date into a snapshot when you shoot it, so the date is always included when you print. It cannot be deleted. • Do not turn on DPOF date stamping for an image that includes a date stamped with the camera's Time Stamp function. Doing so can cause the two stamps to be overprinted.
Configuring computer settings
You can use commercially available image management software to date stamp images.
Professional print service
Request date stamping when ordering prints from a professional print service.

■ Standards Supported by the Camera

• PRINT Image Matching III

Using image editing software and printing on a printer that supports PRINT Image Matching III makes it possible to use information about shooting conditions that is recorded with the image, and produce exactly the type of image you want. PRINT Image Matching and PRINT Image Matching III are trademarks of Seiko Epson Corporation.



• Exif Print

Printing on a printer that supports Exif Print uses information about shooting conditions recorded with the image to enhance printed image quality. Contact your printer manufacturer for information about models that support Exif Print, printer upgrades, etc.



Using the Camera with a Computer

Things you can do using a computer...

You can perform the operations described below while the camera is connected to a computer.

Save images to a computer and view them there		• Save images and view them manually (USB connection) (pages 68, 75). • Transfer images to a computer automatically over a wireless LAN for viewing (Eye-Fi) (page 79).
Transfer images stored on your computer to camera memory		In addition to images, you also can transfer screen shot images from your computer to the camera (Photo Transport*) (page 73).
Play back and edit movies		• You can play back movies (pages 71, 78). • To edit movies, use commercially available software as required.

* Windows only

The procedures you need to perform when using the camera with your computer and when using the bundled software are different for Windows and the Macintosh.

- Windows users should refer to “Using the Camera with a Windows Computer” on page 67.
- Macintosh users should refer to “Using the Camera with a Macintosh” on page 75.

Using the Camera with a Windows Computer

Install the required software in accordance with the version of Windows you are running and what you want to do.

When you want to do this:	Operating System Version	Install this software:	See page:
Save images to a computer and view them there manually	Windows 7, Windows Vista, Windows XP (SP3)	Installation not required.	68
Play movies	Windows 7, Windows Vista, Windows XP (SP3)	Installation not required. • Windows Media Player, which is already installed on most computers, can be used for playback.	71
Edit movies	Windows 7, Windows Vista, Windows XP (SP3)	— • Use commercial software as required.	—
Upload movie files to YouTube	Windows 7, Windows Vista, Windows XP (SP3)	YouTube Uploader for CASIO*	72
Transfer images to the camera	Windows 7, Windows Vista, Windows XP (SP3)	Photo Transport 1.0*	73

* YouTube Uploader for CASIO and Photo Transport will not run under 64-bit versions of Windows OS.

■ Computer System Requirements for Bundled Software

Computer system requirements are different for each of the applications. See the “Read me” file that comes with each application for details. Information about computer system requirements also can be found under “Computer System Requirements for Bundled Software (For Windows)” on page 103 of this manual.

■ Precautions for Windows Users

- Except for Adobe Reader, the bundled software requires Administrator privileges to run.
- Operation on a self-made computer is not supported.
- Operation may not be possible under certain computer environments.

Viewing and Storing Images on a Computer

You can connect the camera to your computer in order to view and store images (snapshot and movie files).

NOTE

- You also can use your computer's card slot (if it has one) or a commercially available card reader to access image files directly from the camera's memory card. For details, see the user documentation that comes with your computer.

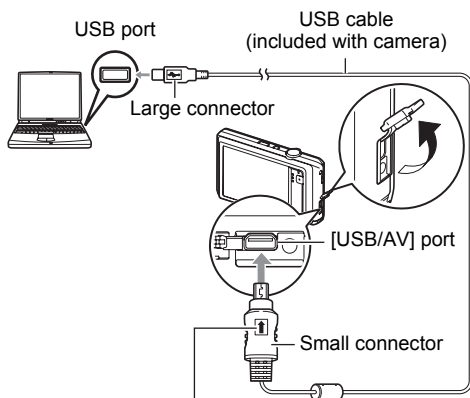
■ To connect the camera to your computer and save files

1. Press [ON/OFF] (Power) to turn off the camera.

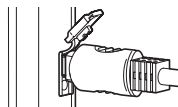
2. Use the USB cable that comes with the camera to connect it to your computer.

The camera will turn on automatically and battery charging will start (page 17).

- The camera may not turn on automatically in the case of certain computer models or connection conditions. If this happens, press [ON/OFF] (Power) to turn on the camera.
- Make sure that you insert the cable connector into the USB port until you feel it click securely into place. Failure to insert the connector fully can result in poor communication or malfunction.
- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.
- When connecting the USB cable to a USB port, make sure you align the connector correctly with the port.
- Your computer may not be able to recognize the camera if you connect via a USB hub. Always connect directly to the computer's USB port.
- The first time you connect the camera to your computer with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.



Making sure that the ↑ mark on the USB cable connector is towards the lens side, connect the cable to the camera.



-
- 3. Windows 7, Windows Vista users: Click “Start” and then “Computer”. Windows XP users: Click “Start” and then “My Computer”.**
-
- 4. Double-click “Removable Disk”.**
- Your computer recognizes the memory card loaded in the camera (or built-in memory if there is no card) as a removable disk.
-
- 5. Right-click the “DCIM” folder.**
-
- 6. On the shortcut menu that appears, click “Copy”.**
-
- 7. Windows 7, Windows Vista users: Click “Start” and then “Documents”. Windows XP users: Click “Start” and then “My Documents”.**
- If you already have a “DCIM” folder in “Documents” (Windows 7, Windows Vista) or “My Documents” (Windows XP), the next step will overwrite it. If you want to keep the existing “DCIM” folder, you need to change its name or move it to a different location before performing the next step.
-
- 8. Windows 7 users: On the “Documents” “Organize” menu, select “Paste”.**
Windows Vista users: On the “Documents” “Edit” menu, select “Paste”.
Windows XP users: On the “My Documents” “Edit” menu, select “Paste”.
- This will paste the “DCIM” folder (and all the image files it contains) into your “Documents” (Windows 7, Windows Vista) or “My Documents” (Windows XP) folder. You now have a copy of the files that are in camera memory on your computer.
-
- 9. After you finish copying images, disconnect the camera from the computer.**
-

■ To view images you copied to your computer

1. Double-click the copied “DCIM” folder to open it.

2. Double-click the folder that contains the images you want to view.

3. Double-click the image file you want to view.

- For information about file names, see “Memory Folder Structure” on page 81.
- An image that was rotated on the camera will be displayed on your computer screen in its original (unrotated) orientation.

Never use your computer to modify, delete, move, or rename any image files that are in the camera's built-in memory or on its memory card.

Doing so can cause problems with the camera's image management data, which will make it impossible to play back images on the camera and can drastically alter remaining memory capacity. Whenever you want to modify, delete, move, or rename an image, do so only on images that are stored on your computer.



IMPORTANT!

- Never unplug the USB cable, or operate the camera while viewing or storing images. Doing so can cause data to become corrupted.

Playing Movies

Windows Media Player, which is already installed on most computers, can be used for movie playback. To play back a movie, first copy the movie to your computer and then double-click the movie file.

■ Minimum Computer System Requirements for Movie Playback

The minimum system requirements described below are necessary to play back movies recorded with this camera on a computer.

Operating System : Windows 7, Windows Vista, Windows XP (SP3)

CPU : Image Quality "HD":

Pentium 4 3.2 GHz or higher

Image Quality "STD":

Pentium M 1.0 GHz or higher

Pentium 4 2.0 GHz or higher

Required Software: Windows Media Player, DirectX 9.0c or higher

- The above are recommended system environments. Configuring one of these environments does not guarantee proper operation.
- Certain settings and other installed software may interfere with proper playback of movies.

■ Movie Playback Precautions

- Be sure to move the movie data to the hard disk of your computer before trying to play it. Proper movie playback may not be possible for data accessed over a network, from a memory card, etc.
- Proper movie playback may not be possible on some computers. If you experience problems, try the following.
 - Try recording movies with a quality setting of "STD".
 - Try upgrading Windows Media Player to the latest version.
 - Quit any other applications you have running, and stop resident applications.

Even if proper playback is not possible on the computer, you can use the AV cable that comes bundled with the camera to connect to the video input terminal of a TV or computer and play back movies that way.

Uploading Movie Files to YouTube

Installing YouTube Uploader for CASIO from the CD-ROM that comes with your camera simplifies uploading of movie files you recorded with the “For YouTube” BEST SHOT scene to YouTube.

■ What is YouTube?

YouTube is a movie sharing site managed by YouTube, LLC where you can upload movies and view movies uploaded by others.

■ To install YouTube Uploader for CASIO

- 1. On the CD-ROM menu screen, select “YouTube Uploader for CASIO”.**
 - 2. After reading the information about installation conditions and system requirements for installation in the “Read me” file, install YouTube Uploader for CASIO.**
-

■ To upload a movie file to YouTube

- Before you can use YouTube Uploader for CASIO, you need to go to the YouTube website (<http://www.youtube.com/>) and register as a user there.
- Do not upload any video that is copyrighted (including neighboring copyrights) unless you yourself own the copyright or you have obtained the permission of the applicable copyright holder(s).
- A single movie shoot with the “For YouTube” scene can have a maximum file size of 2048MB or a recording time of up to 15 minutes.
- The maximum file size for each upload is 2048MB.

- 1. On the BEST SHOT scene menu, select the “For YouTube” scene (page 39).**
 - 2. Press [●] (Movie) to record the movie.**
 - 3. If it isn't already, connect your computer to the Internet.**
 - 4. Connect the camera to your computer (page 68).**
-

The camera will turn on automatically and battery charging will start (page 17). YouTube Uploader for CASIO will start up automatically.

- If this is the first time you are using the application, configure the YouTube user ID and network environment settings, and then click the [OK] button.

5. The left side of the display will have an area for inputting a title, category, and other information required for uploading to YouTube. Enter the required information.

6. The right side of the display shows a list of movie files in camera memory. Select the check box next to the movie file you want to upload.

7. When everything is ready, click the [Upload] button.

This will upload the movie file(s) to YouTube.

- After uploading is complete, click the [Exit] button to exit the application.

Transferring Images from Your Computer to Camera Memory

If you want to transfer images from your computer to the camera, install Photo Transport on your computer from the CD-ROM that comes with the camera.

■ To install Photo Transport

1. On the CD-ROM menu screen, select “Photo Transport”.

2. After reading the information about installation conditions and system requirements for installation in the “Read me” file, install Photo Transport.

■ To transfer images to the camera

1. Connect the camera to your computer (page 68).

The camera will turn on automatically and battery charging will start (page 17).

2. On your computer, click the following: Start → All Programs → CASIO → Photo Transport.

This starts up Photo Transport.

3. Drag the file(s) you want to transfer to the [Transfer] button.

4. Follow the instructions that appear on the display to complete the transfer.

- The details of the instructions that appear on the display and the transferred images will depend on your Photo Transport setup. For details, click the [Settings] button or [Help] button and check the setup.

Transfer Data

- Only image files with the following extensions can be transferred to the camera: jpg, jpeg, jpe, bmp (bmp images are converted to jpeg images automatically when transferred.)
- Certain types of images may not be able to be transferred.
- You cannot transfer movies to the camera.

■ To transfer computer screen captures to the camera

1. Connect the camera to your computer (page 68).

The camera will turn on automatically and battery charging will start (page 17).

2. On your computer, click the following: Start → All Programs → CASIO → Photo Transport.

This starts up Photo Transport.

3. Display the screen whose screen capture you want to transfer.

4. Click the [Capture] button.

5. Draw a boundary around the area you want to capture.

Move your mouse pointer to the upper left corner of the area you want to capture and then hold down the mouse button. Keeping the mouse button depressed, drag the pointer down to the lower right corner of the area and then release the mouse button.

6. Follow the instructions that appear on the display.

This will send an image of the area you selected to the camera.

- The transfer operation converts screen captures to JPEG format.
- The instructions that appear on the display and details about the transferred images will depend on your Photo Transport setup. For details, click the [Settings] button or [Help] button and check the setup.

■ About settings and help

Click the [Settings] button when you want to change the Photo Transport setup. For help about operation procedures and troubleshooting, click the Photo Transport [Help] button.

User Registration

You can perform user registration over the Internet. To do so, of course, you need to be able to connect to the Internet with your computer.

1. On the CD-ROM menu screen, click the “Register” button.

- This starts up your Web browser and accesses the user registration website. Follow the instructions that appear on your computer screen to register.

Using the Camera with a Macintosh

Install the required software in accordance with what version of the Macintosh OS you are running and what you want to do.

When you want to do this:	Operating System Version	Install this software:	See page:
Save images to your Macintosh and view them there manually	OS X	Installation not required.	75
Save images to your Macintosh automatically/ Manage images	OS X	Use iPhoto, which comes bundled with some Macintosh products.	77
Play movies	OS X	You can playback with QuickTime, which comes bundled with your operating system.	78

Connecting the Camera to Your Computer and Saving Files



IMPORTANT!

- The camera does not support operation with Mac OS X 10.0. Operation is supported with Mac OS 10.1, 10.2, 10.3, 10.4, 10.5, and 10.6 (using the OS standard USB driver) only.

NOTE

- You also can use your computer's card slot (if it has one) or a commercially available card reader to access image files directly from the camera's memory card. For details, see the user documentation that comes with your computer.

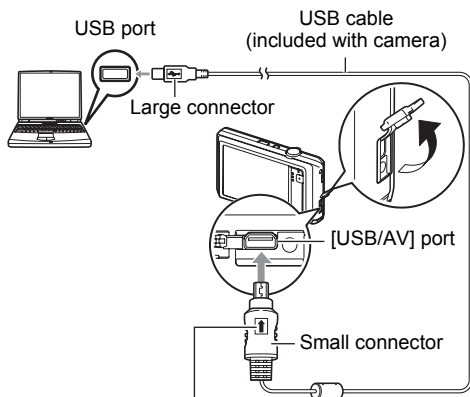
■ To connect the camera to your computer and save files

1. Press [ON/OFF] (Power) to turn off the camera.

2. Use the USB cable that comes with the camera to connect it to your Macintosh.

The camera will turn on automatically and battery charging will start (page 17).

- The camera may not turn on automatically in the case of certain computer models or connection conditions. If this happens, press [ON/OFF] (Power) to turn on the camera.
- Make sure that you insert the cable connector into the USB port until you feel it click securely into place. Failure to insert the connector fully can result in poor communication or malfunction.
- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.
- When connecting the USB cable to a USB port, make sure you align the connector correctly with the port.
- Your computer may not be able to recognize the camera if you connect via a USB hub. Always connect directly to the computer's USB port.
- The first time you connect the camera to your computer with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.



3. Double-click the camera's drive icon.

The camera's back lamp will light green at this time. In this mode, your Macintosh recognizes the memory card loaded in the camera (or the camera's built-in memory if it does not have a memory card loaded) as a drive. The appearance of the drive icon depends on the Mac OS version you are using.

4. Drag the "DCIM" folder to the folder to which you want to copy it.

5. After the copy operation is complete, drag the drive icon to Trash.

6. Disconnect the camera from the computer.

■ To view copied images

1. Double-click the camera's drive icon.
2. Double-click the "DCIM" folder to open it.
3. Double-click the folder that contains the images you want to view.
4. Double-click the image file you want to view.
 - For information about file names, see "Memory Folder Structure" on page 81.
 - An image that was rotated on the camera will be displayed on your Macintosh screen in its original (unrotated) orientation.

Never use your computer to modify, delete, move, or rename any image files that are in the camera's built-in memory or on its memory card.

Doing so can cause problems with the camera's image management data, which will make it impossible to play back images on the camera and can drastically alter remaining memory capacity. Whenever you want to modify, delete, move, or rename an image, do so only on images that are stored on your computer.

★ IMPORTANT!

- Never unplug the USB cable, or operate the camera while viewing or storing images. Doing so can cause data to become corrupted.

Transferring Images Automatically and Managing Them on Your Macintosh

If you are running Mac OS X, you can manage snapshots using iPhoto, which comes bundled with some Macintosh products.

Playing a Movie

You can use QuickTime, which comes bundled with your operating system, to play back movies on a Macintosh. To play back a movie, first copy it to your Macintosh and then double-click the movie file.

■ Minimum Computer System Requirements for Movie Playback

The minimum system requirements described below are necessary to play back movies recorded with this camera on a computer.

Operating System : Mac OS X 10.3.9 or higher

Required Software : QuickTime 7 or higher

- The above are recommended system environments. Configuring one of these environments does not guarantee proper operation.
- Certain settings and other installed software may interfere with proper playback of movies.

■ Movie Playback Precautions

Proper movie playback may not be possible on some Macintosh models. If you experience problems, try the following.

- Change the movie image quality setting to “STD”.
- Upgrade to the latest version of QuickTime.
- Shut down other applications that are running.

Even if proper playback is not possible on your Macintosh, you can use the AV cable that comes bundled with the camera to connect to the video input terminal of a TV or Macintosh and play back movies that way.



IMPORTANT!

- Be sure to move the movie data to the hard disk of your Macintosh before trying to play it. Proper movie playback may not be possible for data accessed over a network, from a memory card, etc.

User Registration

Internet registration only is supported. Visit the following CASIO website to register:
<http://world.casio.com/qv/register/>

Using an Eye-Fi Wireless SD Memory Card to Transfer Images (Eye-Fi)

Shooting with an Eye-Fi wireless SD memory card loaded in the camera makes it possible to transfer image data automatically to a computer via wireless LAN.

- 1. Configure LAN access point, transfer destination and other settings for the Eye-Fi card in accordance with the instructions that come with the Eye-Fi card.**

- 2. After configuring settings, load the Eye-Fi card into the camera and record.**

Images you record are sent by wireless LAN to your computer, etc.

- For full details, see the user documentation that comes with the Eye-Fi card.
- Before formatting a new Eye-Fi card to use it for the first time, copy the Eye-Fi Manager install files to your computer. Do this before formatting the card.



IMPORTANT!

- Recorded images are transferred over wireless LAN. Do not use the Eye-Fi card or turn off Eye-Fi card communication (page 83) when on an aircraft or in any other location where use of wireless communication is limited or prohibited.
- The Eye-Fi icon will be displayed on the monitor screen while all three of the following conditions exist: Eye-Fi card loaded; Eye-Fi setting "On"; Status On (page 10).
- The camera's Auto Power Off function is disabled while image data transfer is in progress.
- A confirmation message will appear on the monitor screen if you try to turn off the camera while image data transfer is in progress. Follow the instructions in the messages (page 111).
- Transfer of a large number of images can take some time to complete.
- Depending on the type of Eye-Fi card you are using and its settings, images on the Eye-Fi card may be deleted following image data transfer.
- When recording a movie to an Eye-Fi card, it can take too much time to record data, which can result in breaks in the image and/or audio.
- Proper Eye-Fi card data communication may not be possible due to camera settings, battery level, or operating conditions.



Files and Folders

The camera creates a file each time you shoot a snapshot, record a movie, or perform any other operation that stores data. Files are grouped by storing them in folders. Each file and folder has its own unique name.

- For details about how folders are organized in memory, see “Memory Folder Structure” (page 81).

Name and Maximum Number Allowed	Example
File	
Each folder can contain up to 9999 files named CIMG0001 through CIMG9999. The extension on the file name depends on the file type.	26th file name: CIMG0026.JPG Serial number (4 digits) Extension
Folders	
Folders are named from 100CASIO to 999CASIO. There can be up to 900 folders in memory. • The BEST SHOT (page 39) includes a sample scene that optimizes settings for auction site images. Depending on your camera model, the sample scene is named either “For eBay” or “Auction”. – Images recorded with the eBay scene are stored in a folder named “100_EBAY”. – Images recorded with the Auction scene are stored in a folder named “100_AUCT”. • BEST SHOT also has a scene named “For YouTube” that optimizes movie settings for recording movies for upload to YouTube. Images recorded with the YouTube scene are stored in a folder named “100YOUTB”.	100th folder name: 100CASIO Serial number (3 digits)

- You can view folder and file names on your computer. For details about how file names are displayed on the camera’s monitor screen, see page 10.
- The total number of folders and files allowed depends on the image size and quality, and capacity of the memory card being used for storage.

Memory Card Data

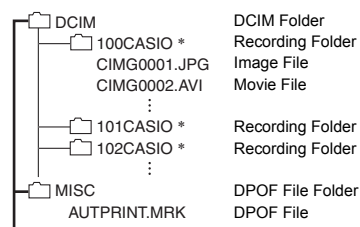
The camera stores images you shoot in accordance with the Design Rule for Camera File System (DCF).

■ About DCF

The following operations are supported for DCF-compliant images. Note, however, that CASIO makes no performance guarantees concerning these operations.

- Transferring this camera's DCF-compliant images to another manufacturer's camera and view them.
- Printing this camera's DCF-compliant images on another manufacturer's printer.
- Transferring another camera's DCF-compliant images to this camera and view them.

■ Memory Folder Structure



* Other folders are created when the following BEST SHOT scenes are used for recording: "For eBay" or "Auction" (scene name depends on camera model), or "For YouTube". The following shows the name of the folder created for each scene.

- eBay scene: 100_EBAY
- Auction scene: 100_AUCT
- YouTube scene: 100YOUTB

■ Supported Image Files

- Image files shot with this camera
- DCF-compliant image files

This camera may not be able to display an image, even if it is DCF-compliant. When displaying an image recorded on another camera, it may take a long time for the image to appear on this camera's monitor screen.

■ Built-in Memory and Memory Card Data Handling Precautions

- Whenever copying memory contents to your computer, you should copy the DCIM folder and all of its contents. A good way to keep track of multiple DCIM folders is to change their names to dates or something similar after you copy them to your computer. If you later decided to return a DCIM folder to the camera, however, be sure to change its name back to DCIM. The camera is designed to recognize only a root file with the name DCIM. Note the camera also will not be able to recognize the folders inside the DCIM folder unless they have the names they originally had when you copied them from the camera to your computer.
- Folders and files must be stored in accordance with the “Memory Folder Structure” shown on page 81 in order for the camera to be able to recognize them correctly.
- You also can use a PC card adapter or a memory card reader/writer to access camera files directly from the camera's memory card.

Other Settings (Set Up)

This section explains menu items that you can use to configure settings and perform other operations in both the REC mode and PLAY mode.

For information about menu operations, see page 41.

Turning off Eye-Fi Card Communication (Eye-Fi)

Procedure

MENU → Setup → Eye-Fi

Select "Off" to disable Eye-Fi card communication (page 79).

Configuring Camera Sound Settings (Sounds)

Procedure

MENU → Setup → Sounds

Startup		Toggles the operation tone between on and off.
Half Shutter		
Shutter		
Operation		
Volume	Operation	Specifies the sound volume. This volume setting is also used during video output (from the USB/AV port) (page 56).
	Playback	Specifies the volume of movie audio output. This volume setting is also used during video output (from the USB/ AV port) (page 56).

- Setting a volume level of 0 mutes output.

Turning the Startup Movie On or Off (Startup)

Procedure

MENU → Setup → Startup

To play the movie that comes pre-recorded in camera memory each time you turn on power, select "On" for this setting.

- The startup movie does not play when you turn on the camera by pressing [▶] (PLAY).

Specifying the File Name Serial Number Generation Rule (File No.)

Procedure

MENU → Setup → File No.

Use the following procedure to specify the rule that governs generation of the serial number used in file names (page 80).

Continue	Tells the camera to remember the last used file number. A new file will be named using the next sequential number, even if files are deleted or if a blank memory card is loaded. If a memory card is loaded and that card already has files stored on it and the largest sequential number in the existing file names is greater than the largest sequential number remembered by the camera, numbering of new files will start from the largest sequential number in the existing file names plus 1.
Reset	Restarts the serial number from 0001 whenever all files are deleted or when the memory card is replaced with a blank one. If a memory card is loaded and that card already has files stored on it, numbering of new files will start from the largest sequential number in the existing file names number plus 1.

Configuring World Time Settings (World Time)

Procedure

MENU → Setup → World Time

Setting a Travel Destination

You can use the World Time screen to view the current time in a zone that is different from your Home City when you go on a trip, etc. World Time displays the current time in 162 cities in 32 time zones around the globe.

1. Touch “Destination”.

- To change the geographic area and city for the time where you normally use the camera, select “Home”.

2. Touch “City”.

To specify summer time for the destination city, select “DST” and then select the “On” setting (Summer time is used in some geographical areas to advance the current time setting by one hour during the summer months).

3. Drag upwards and downwards until you find the area of the destination city you want, and then touch to select it.

4. Drag upwards and downwards until you find the city you want, and then touch to select it.

 IMPORTANT!

- Before configuring World Time settings, make sure that the Home City setting is the place where you live or normally use the camera. If it isn't, select “Home” on the screen in step 1 and configure the Home City, date, and time settings as required (page 87).

Selecting the Time Display

Use this procedure to specify the time displayed by the camera for your home city and destination.

1. Touch “Time”.

2. Touch “Home” or “Destination”.

This will configure the time setting of the location you touched in the previous step.

Time Stamping Snapshots (Timestamp)

Procedure

MENU → Setup → Timestamp

You can configure the camera to stamp the recording date only, or date and time in the lower right corner of each snapshot.

- Once date and time information is stamped into a snapshot, it cannot be edited or deleted.

Example: July 10, 2012, 1:25 p.m.

Date	2012/7/10
Date&Time	2012/7/10 1:25pm
Off	No stamping of date and/or time

- Even if you do not stamp the date and/or time with Timestamp, you can do so later using some printing application.
- Stamping is performed in accordance with the date and time settings (page 87) and the display style settings (page 87).

Setting the Camera's Clock (Adjust)

Procedure

MENU → Setup → Adjust

1. Touch the value you want to change (year, month, day, hour, minute).

2. Touch “▲” or “▼” to change the currently selected value.

- You can specify a date from 2001 to 2049.
- Be sure to select your Home City (page 85) before setting the time and date. If you set the time and date while the wrong city is selected for your Home City, the times and dates of all of the World Time cities (page 85) will be wrong.
- To switch between 12-hour and 24-hour format, touch the 12/24 hour switch icon.
- Touching and holding “▲” or “▼” scrolls at high speed.



12/24 hour switch icon

3. Touch “OK”.

Specifying the Date Style (Date Style)

Procedure

MENU → Setup → Date Style

You can select from among three different styles for the date.

Example: July 10, 2012

YY/MM/DD	12/7/10
DD/MM/YY	10/7/12
MM/DD/YY	7/10/12

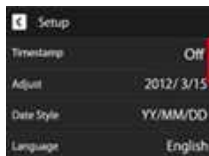
Specifying the Display Language (Language)

Procedure

MENU → Setup → Language

■ Specify the display language you want.

1. On the menu screen, touch “Setup”.
2. Touch “Language”.
3. Drag upwards and downwards until you find the language you want, and then touch to select it.



- Camera models sold in certain geographic areas may not support display language selection.

Calibrating the Touch Panel (Calibrate TP)

Procedure

MENU → Setup → Calibrate TP

Calibrate the touch panel whenever a touch operation does not produce the desired results or if touch panel response is poor.

1. Touch “Start”.
2. Touch the centers of each of the four cross marks “+” as they appear on the screen. Take your time when performing this operation and wait until the next cross appears.



The message “Complete” indicates that touch panel calibration is complete.

- Carefully touch the center of each cross mark (+).

Configuring Sleep State Settings (Sleep)

Procedure

MENU → Setup → Sleep

This feature turns off the monitor screen whenever no camera operation is performed for a preset amount of time. Press any button or touch the screen to turn the monitor screen back on.

Trigger Time Settings: 30 sec, 1 min, 2 min, Off (Sleep is disabled while "Off" is selected.)

- Sleep is disabled under any of the following conditions.
 - In the PLAY mode
 - While the camera is connected to a computer or other device
 - During a slideshow
 - During movie recording and playback
- When both sleep and Auto Power Off are turned on, Auto Power Off takes priority.

Configuring Auto Power Settings (Auto Power Off)

Procedure

MENU → Setup → Auto Power Off

Auto Power Off turns off the camera whenever no camera operation is performed for a preset amount of time.

Trigger Time Settings: 1 min, 2 min, 5 min (The trigger time is always 5 minutes in the PLAY mode.)

- Auto Power Off is disabled under any of the following conditions.
 - While the camera is connected to a computer or other device
 - During a slideshow
 - During movie recording and playback

Selecting the Screen Aspect Ratio and Video Output System (Video Out)

Procedure

MENU → Setup → Video Out

You can use the procedure in this section to select either NTSC or PAL as the video output system. You can also specify an aspect ratio of 4:3 or 16:9.

NTSC	Video system used in Japan, the U.S., and other countries
PAL	Video system used in Europe and other areas
4:3	Normal TV screen aspect ratio
16:9	Wide screen aspect ratio

- Select the aspect ratio (4:3 or 16:9) that matches the type of TV you plan to use. Images will not display correctly if you select the wrong aspect ratio.
- Images will not display correctly unless the camera's video signal output setting matches the video signal system of the TV or other video equipment.
- Images cannot be displayed correctly on a TV or video equipment that is not NTSC or PAL.

Formatting Built-in Memory or a Memory Card (Format)

Procedure

MENU → Setup → Format

If a memory card is loaded in the camera, this operation will format the memory card. It will format built-in memory if no memory card is loaded.

- The format operation will delete all contents on the memory card or in built-in memory. It cannot be undone. Make sure you do not need any data currently on the card or in built-in memory before you format it.
- Formatting built-in memory will delete the following data.
 - Protected images
 - Startup screen
- Formatting a memory card will delete the following data.
 - Protected images
- Check the battery level before starting a format operation and make sure it is not too low. Formatting may not be performed correctly and the camera may stop operating normally if the camera powers down while formatting is in progress.

Resetting the Camera to Factory Defaults (Reset)

Procedure

MENU → Setup → Reset

See page 104 for details about the camera's factory default settings.

The settings below are not reset.

World Time settings, clock settings, date style, screen language, video output

Precautions during Use

■ Avoid Use While In Motion

- Never use the camera to record or play back images while operating an automobile or other vehicle, or while walking. Looking at the monitor while in motion creates the risk of serious accident.

■ Directly Viewing the Sun or Bright Light

- Never look at the sun or any other bright light through the cameras viewfinder. Doing so can damage your eyesight.

■ Flash

- Never use the flash unit in areas where flammable or explosive gas may be present. Such conditions create the risk of fire and explosion.
- Never fire the flash in the direction of a person operating a motor vehicle. Doing so can interfere with the driver's vision and creates the risk of accident.
- Never fire the flash too close to the eyes of the subject. Doing so creates the risk of loss of eyesight.

■ Monitor Screen

- Should the monitor screen ever become cracked, never touch any of the liquid inside the monitor screen. Doing so creates the risk of skin inflammation.
- Should monitor screen liquid ever get into your mouth, immediately rinse your mouth out and contact your physician.
- Should monitor screen liquid ever get into your eyes or onto your skin, immediately rinse with clean water for at least 15 minutes and contact your physician.

■ Connections

- Never plug any devices that are not specified for use with this camera into connectors. Connecting a non-specified device creates the risk of fire and electric shock.

■ Transport

- Never operate the camera inside of an aircraft or anywhere else where operation of such devices is restricted. Improper use creates the risk of serious accident.

■ **Smoke, abnormal odor, overheating, and other abnormalities**

- Continued use of the camera while it is emitting smoke or strange odor, or while it is overheating creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present.
 1. Turn off the camera.
 2. Remove the battery from the camera, taking care to protect yourself against burn injury.
 3. Contact your dealer or nearest CASIO authorized service center.

■ **Water and Foreign Matter**

- Water, other liquids, or foreign matter (especially metal) getting inside the camera creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present. Particular care is required when using the camera where it is raining or snowing, near the ocean or other body of water, or in a bathroom.
 1. Turn off the camera.
 2. Remove the battery from the camera.
 3. Contact your dealer or nearest CASIO authorized service center.

■ **Dropping and Rough Treatment**

- Continued use of the camera after it is damaged by dropping or other rough treatment creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present.
 1. Turn off the camera.
 2. Remove the battery from the camera.
 3. Contact your dealer or nearest CASIO authorized service center.

■ **Keep Away From Fire**

- Never expose the camera to fire, which can cause it to explode and creates the risk of fire and electric shock.

■ **Disassembly and Modification**

- Never try to take the camera apart or modify it in any way. Doing so creates the risk of electric shock, burn injury, and other personal injury. Be sure to leave all internal inspection, maintenance, and repair up to your dealer or nearest CASIO authorized service center.

■ Locations To Be Avoided

- Never leave the camera in any of the following types of locations. Doing so creates the risk of fire and electric shock.
 - Areas subject to large amounts of humidity or dust
 - Food preparation areas or other locations where oil smoke is present
 - Near heaters, on a heated carpet, in areas exposed to direct sunlight, in a closed vehicle parked in the sun, or other areas subject to very high temperatures
- Never place the camera on an unstable surface, on a high shelf, etc. Doing so can cause the camera to fall, creating the risk of personal injury.

■ Backing Up Important Data

- Always keep backup copies of important data in camera memory by transferring it to a computer or other storage device. Note that data can be deleted in the case of camera malfunction, repair, etc.

■ Memory Protection

- Whenever replacing the battery, be sure to follow the correct procedure as described in the documentation that comes with the camera. Incorrectly replacing the battery can result in corruption or loss of data in camera memory.

■ Rechargeable Battery

- Use only the USB-AC adaptor (AD-C53U) or the specified device to charge the battery. Attempting to charge the battery by an unauthorized means creates the risk of battery overheating, fire, and explosion.
- Do not expose or immerse the battery in fresh water or salt water. Doing so can damage the battery, and cause deterioration of its performance and loss of service life.
- The battery is intended for use with a CASIO Digital Camera only. Use with any other device creates the risk of the battery damage, or deterioration of battery performance and service life.
- Failure to observe any of the following precautions creates the risk of battery overheating, fire, and explosion.
 - Never use or leave the battery near open flame.
 - Do not expose the battery to heat or fire.
 - Never carry or store the battery together with items that can conduct electricity (necklaces, pencil lead, etc.).
 - Never disassemble the battery, pierce it with a needle, or expose it to strong impact (hit it with a hammer, step on it, etc.), and never apply solder to it. Never place the battery into a microwave oven, heater, high-pressure generating device, etc.

- Should you ever notice leakage, strange odor, heat generation, discoloration, deformation, or any other abnormal condition while using, charging, or storing a battery, immediately remove it from the camera and keep it away from open flame.
- Do not use or leave the battery under direct sunlight, in an automobile parked in the sun, or in any other area subject to high temperatures. Doing so can damage the battery, and cause deterioration of its performance and loss of service life.
- If battery charging does not end normally within the specified charging time, stop charging anyway and contact your local CASIO authorized service center. Continued charging creates the risk of battery overheating, fire, and explosion.
- Battery fluid can damage your eyes. Should battery fluid get into your eyes accidentally, immediately rinse them with clean tap water and then consult a physician.
- Be sure to read the user documentation that comes with the camera and special USB-AC adaptor before using or charging the battery.
- If a battery is to be used by young children, make sure that a responsible adult makes them aware of the precautions and proper handling instructions, and make sure that they handle the battery correctly.
- Should fluid from a battery accidentally get onto clothing or your skin, immediately rinse it off with clean tap water. Prolonged contact with battery fluid can cause skin irritation.

■ Battery Life

- Battery continuous operation times provided in this manual represent the approximate amount of time before the camera turns off due to low battery power when being powered by the special battery under normal temperature (23°C (73°F)). They do not guarantee that you will be able to achieve the indicated level of operation. Actual battery life is greatly affected by ambient temperature, battery storage conditions, the amount of time spent in storage, etc.
- Leaving the camera on can run down the battery and cause the low battery warning to appear. Turn off the camera whenever you are not using it.
- The low battery warning indicates that the camera is about to turn off due to low battery power. Charge the battery as soon as possible. Leaving a low or dead battery in the camera can lead to battery leakage and data corruption.

■ Data Error Precautions

Your digital camera is manufactured using precision digital components. Any of the following creates the risk of corruption of data in camera memory.

- Removing the battery or memory card while the camera is performing some operation
- Removing the battery or memory card while the back lamp is flashing green after turning off the camera
- Disconnecting the USB cable while communication is in progress
- Using a battery that is low
- Other abnormal operations

Any of the above conditions can cause an error message to appear on the monitor screen (page 111). Perform the action indicated by the message that appears.

■ Operating Environment

- Operating Temperature Requirements: 0 to 40°C (32 to 104°F)
- Operating Humidity: 10 to 85% (non condensation)
- Do not place the camera in any of the following locations.
 - In an area exposed to direct sunlight, or large amounts of moisture, dust, or sand
 - Near an air conditioner or in other areas subjected to extreme temperature or humidity
 - Inside of a motor vehicle on a hot day, or in an area subjected to strong vibration

■ Condensation

Sudden and extreme temperature changes, such as when the camera is moved from the outdoors on a cold winter day into a warm room, can cause water droplets called “condensation” to form on the interior and the exterior of the camera, which creates the risk of malfunction. To prevent condensation from forming seal the camera in a plastic bag before changing locations. Then leave the bag sealed to allow the air inside to naturally change to the same temperature as the air in the new location. After that, remove the camera from the bag and open the battery cover for a few hours.

■ Lens

- Never apply too much force when cleaning the surface of the lens. Doing so can scratch the lens surface and cause malfunction.
- You may sometimes notice some distortion in certain types of images, such as a slight bend in lines that should be straight. This is due to the characteristics of lenses, and does not indicate malfunction of the camera.

■ Caring for your camera

- Never touch the lens or flash window with your fingers. Finger smudges, dirt, and other foreign matter on the lens or flash window can interfere with proper operation of the camera. Use a blower or other means to keep the lens and flash window free of dirt and dust, and wipe gently with a soft, dry cloth.
- To clean the camera, wipe it with a soft, dry cloth.

■ Old Rechargeable Battery Handling Precautions

- Insulate the positive and negative terminals with tape, etc.
- Do not peel the covering off of the battery.
- Do not try to take the battery apart.

■ USB-AC adaptor Handling Precautions



- Never plug the power cord into an outlet whose voltage rating is different from that marked on the power cord. Doing so creates the risk of fire, malfunction, and electric shock.
 - Take care to protect the power cord against damage and breaking. Never place heavy objects onto the power cord, or expose it to intense heat. Doing so can damage the power cord, creating the risk of fire and electric shock.
 - Never try to modify the power cord, or subject it to severe bending, twisting, or pulling. Doing so creates the risk of fire, malfunction, and electric shock.
 - Never plug in or unplug the power cord while your hands are wet. Doing so creates the risk of electric shock.
 - Do not plug the power cord into an outlet or extension cord that is shared by other devices. Doing so creates the risk of fire, malfunction, and electric shock.
 - Should the power cord ever become damaged (to the point that internal wires are exposed or cut), immediately contact your original retailer or a CASIO authorized service center to request repair. Continued use of a damaged power cord creates the risk of fire, malfunction, and electric shock.
-
- The USB-AC adaptor becomes slightly warm during charging. This is normal and does not indicate malfunction.
 - Unplug the power cord from the power outlet when you are not using the USB-AC adaptor.
 - Never use detergent to clean the power cord (especially the plug).
 - Never cover the USB-AC adaptor with a blanket, etc. Doing so creates the risk of fire.

■ Other Precautions

The camera becomes slightly warm during use. This is normal and does not indicate malfunction.

■ Copyrights

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Charging

■ If the camera's back lamp starts flashing red...

If the back lamp starts flashing red during charging, it means that further charging is not possible for one of the reasons below. Perform the actions described below to correct the problem and then try charging again.

Ambient temperature or the temperature of the battery is abnormally high or low

Unplug the USB cable from the camera and wait for a while until the camera is within the temperature range of 5°C to 35°C (41°F to 95°F), and then try charging again.

Safety timer activated

A battery that has not been used for a long time, certain types of computers, and connection conditions can cause charging to take longer than normal. If charging takes longer than about six hours, a safety timer will terminate it automatically, even if the battery is not fully charged. If the battery has not been used for a very long time, charging may terminate automatically after only about 45 minutes.

- 1) Using a battery that has not been used for a long time.
Disconnect and then reconnect the USB cable to resume charging.
- 2) Insufficient power supply when connected to computer
Connect directly to a USB port what supplies a current of 500mA.

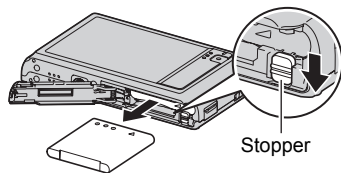
For details about the power supply capacity of a computer's USB port, contact the manufacturer of the computer. Though disconnecting and then reconnecting the USB cable will resume charging, you may need to do so repeatedly if the power supply capacity of the computer is low.

If problems continue to occur after you perform the above steps, it could mean that the battery is faulty. Contact your nearest CASIO authorized service center.

To replace the battery

1. Open the battery cover and remove the current battery.

With the monitor screen side of the camera facing upwards, slide the stopper in the direction indicated by the arrow in the illustration. After the battery pops out, pull it the rest of the way out of the camera.



2. Load a new battery.

Battery Precautions

■ Precautions during Use

- Operation provided by a battery under cold conditions is always less than operation under normal temperatures. This is due to the characteristics of the battery, not the camera.
- Charge the battery in an area where the temperature is within the range of 5°C to 35°C (41°F to 95°F). Outside this temperature range charging can take longer than normal or even fail.
- Do not tear or remove the battery outer label.
- If a battery provides only very limited operation following a full charge, it probably means the battery has reached the end of its service life. Replace the battery with a new one.

■ Storage Precautions

- Storing the camera for a long time while it is charged can cause deterioration of battery characteristics. If you do not plan to use a camera for some time, fully use up its charge before storing it.
- Always remove the battery from the camera when you are not using it. A battery left in the camera can discharge and go dead, which will require some time to charge when you need to use the camera.
- Store batteries in a cool, dry place (20°C (68°F) or lower).
- To prevent over discharging of an unused battery, fully charge it, and then load it in the camera and fully use up the charge about once every six months.

Using the Camera in another Country

■ Precautions during Use

- The bundled USB-AC adaptor is designed for operation with any power supply in the range of 100V to 240V AC, 50/60Hz. Note, however, that the shape of the power cord plug depends on each country or geographic area. Before taking the camera and USB-AC adaptor along on a trip, check with travel agent about the power supply requirements in your destination(s).
- Do not connect the USB-AC adaptor to a power supply through a voltage converter or similar device. Doing so can lead to malfunction.

■ Extra Batteries

- Taking along extra fully charged batteries (NP-120) is recommended while on a trip in order to avoid not being able to shoot images due to the battery going dead.

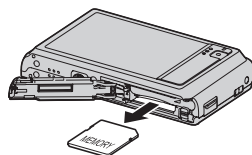
Using a Memory Card

See page 21 for information about supported memory cards and how to load a memory card.

To replace the memory card

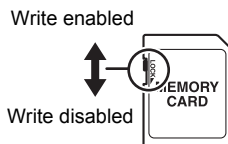
Press the memory card and then release it. This will cause it to pop out of the memory card slot slightly. Pull the card out the rest of the way and then insert another one.

- Never remove a card from the camera while the back lamp is flashing green. Doing so can cause the image save operation to fail and even damage the memory card.



■ Using a Memory Card

- SD memory cards, SDHC memory cards, and SDXC memory cards have a write protect switch. Use the switch when you need to guard against accidentally deleting data. Note, however, if you write protect an SD memory card you must then turn write protection off whenever you want to record to it, format it, or delete any of its images.
- If a memory card starts to behave abnormally during image playback, you can restore normal operation by reformatting it (page 91). However, it is recommended that you always take along multiple memory cards whenever using the camera far away from the home or office.
- As you record data to and delete data from a memory card a number of times, it loses its ability to retain data. Because of this, periodic re-formatting of a memory card is recommended.



- Electrostatic charge, electrical noise, and other phenomena can cause data to become corrupted or even lost. Make sure that you always back up important data on other media (CD-R, CD-RW, hard disk, etc.).

■ Memory Card Handling Precautions

Certain types of memory cards can slow down processing speeds. In particular, you may experience problems saving high-quality (HD) movies. When using the camera's built-in memory or certain types of memory cards, it can take too much time to record data, which can result in breaks in the image and/or audio. This condition is indicated by the movie icon turning yellow on the monitor screen. Use of a memory card with a maximum transfer speed of at least 10MB per second is recommended.

■ Discarding or Transferring Ownership of a Memory Card or the Camera

- The format and delete functions of the camera do not actually delete files from the memory card. The original data remains on the card. Note that responsibility for the data on a memory card lies with you. The following procedures are recommended whenever you discard a memory card or the camera, or if you transfer ownership to another party.
 - When discarding a memory card, either physically destroy the memory card or use commercially available data delete software to completely delete the data on the memory card.
 - When transferring ownership of a memory card to another party, use commercially available data deletion software to completely delete the data on it. Use the format function (page 90) to completely delete the data in built-in memory before discarding or transferring ownership of the camera.

Computer System Requirements for Bundled Software (For Windows)

Computer system requirements are different for each of the applications. Be sure to check the requirements for the particular application you are trying to use. Note that the values provided here are minimum requirements for running each application. Actual requirements are greater, depending on the number of images and the sizes of the images being handled.

YouTube Uploader for CASIO

Operating System : Windows 7, Windows Vista, Windows XP (SP3)

- Sufficient memory to run the operating system
- Computer configuration that enables playback of movies on the YouTube site
- Computer configuration that enables upload of movies to the YouTube site

Photo Transport 1.0

Operating System : Windows 7, Windows Vista, Windows XP (SP3)

Memory : At least 64MB

Hard Disk Drive Space : At least 2MB

For details about the minimum system requirements for each software application, see the “Read me” files on the CASIO Digital Camera Software CD-ROM that comes bundled with the camera.

Reset Initial Default Settings

The tables in this section show the initial default settings on menus that appear in the REC mode and PLAY mode when you reset the camera (page 91).

- A dash (–) indicates an item whose setting is not reset or an item for which there is no reset setting.

■ REC Menu

Touch Shutter	On
Self-timer	Off
Focus	AF
Image Size	14M
Movie Quality	HD
Face Detection	On
EV Shift	0.0
White Balance	Auto
ISO	Auto
Lighting	Off
Color Filter	Off

Anti Shake	Off
Grid	Off
Memory	BEST SHOT: Off / Touch Shutter: On / Flash: On / Self-timer: Off / White Balance: Off / ISO: Off / Focus: Off / MF Position: Off / Zoom Position: Off
Setup	→ Page 105

■ PLAY Menu

Rotation	–
DPOF Printing	–
Protect	–
Resize	–

Trimming	–
Copy	–
Setup	→ Page 105

■ Setup Menu

Eye-Fi	On
Sounds	Startup: On / Half Shutter: On / Shutter: On / Operation: On / Operation: 3 / Playback: 3
Startup	Off
File No.	Continue
World Time	—
Timestamp	Off
Adjust	—

Date Style	—
Language	—
Calibrate TP	—
Sleep	1 min
Auto Power Off	2 min
Video Out	—
Format	—
Reset	—
Version	—

When things don't go right...

Troubleshooting

Problem	Possible Cause and Recommended Action
Power Supply	
Power does not turn on.	1)The battery may not be loaded correctly (page 14). 2)The battery may be dead. Charge the battery (page 15). If the battery goes dead soon after being charged, it means the battery has reached the end of its life and needs to be replaced. Purchase a separately available CASIO NP-120 rechargeable lithium ion battery.
The camera suddenly powers down.	1)Auto Power Off may have activated (page 89). Turn power back on. 2)The battery may be dead. Charge the battery (page 15). 3)The camera's protection function may have activated because camera temperature is too high. Turn off the camera and wait until it cools down before trying to use it again.
Power will not turn off. Nothing happens when a button is pressed.	Remove the battery from the camera and then reload it.
Image Recording	
Image is not recorded when the shutter button is pressed.	1)If the camera is in the PLAY mode, touch "⏏" (REC) to enter the REC mode. 2)If the flash is charging, wait until the charge operation finishes. 3)If the message "Memory Full" appears, transfer images to your computer, delete images you no longer need, or use a different memory card.
Auto Focus does not focus properly.	1)If the lens is dirty, clean it off. 2)The subject may not be in the center of the focus frame when you compose the image. 3)The subject you are shooting may not be a type that is compatible with Auto Focus (page 31). Use manual focus (page 43). 4)You may be moving the camera when shooting. Try shooting with Anti Shake or use a tripod. 5)You may be pressing the shutter button all the way without waiting for Auto Focus. Half-press the shutter button and allow enough time for Auto Focus to focus.

Problem	Possible Cause and Recommended Action
The subject is out of focus in the recorded image.	The image may not be focused properly. When composing the image, make sure the subject is located inside the focus frame.
The flash does not fire.	1) If  (Flash Off) is selected as the flash mode, change to another mode (page 33). 2) If the battery is dead, charge it (page 15). 3) If a BEST SHOT scene that uses  (Flash Off) is selected, change to a different flash mode (page 33) or select a different BEST SHOT scene (page 39).
The red  (Flash Off) icon is displayed on the monitor screen and the flash does not fire.	The flash unit may be malfunctioning. Contact a CASIO authorized service center or your original retailer. Note that though the flash will not fire, you still can use the camera for non-flash shots.
Camera powers down during Self-timer countdown.	The battery may be dead. Charge the battery (page 15).
The monitor screen image is out of focus.	1) You may be using Manual Focus and have not focused the image. Focus the image (page 44). 2) You may be using "Macro" for scenery or portraits. Use Auto Focus for scenery and portrait shots (page 43). 3) You may be trying to use Auto Focus or ∞ (Infinity) when shooting a close-up shot. Use the Macro for close ups (page 43).
There is a vertical line in the monitor screen image.	Shooting a very brightly lit subject can cause a vertical band to appear in the monitor screen image. This is a CCD phenomenon known as "vertical smear", and does not indicate malfunction of the camera. Note that vertical smear is not recorded with the image in the case of a snapshot, but it is recorded in the case of a movie.
There is digital noise in images.	1) Sensitivity may have been increased automatically for a dark subject, which increases the chance of digital noise. Use a light or some other means to illuminate the subject. 2) You may be attempting to shoot in a dark location with  (Flash Off) selected, which can increase digital noise and make images appear coarse. In this case, turn on flash (page 33) or use lights for illumination. 3) Shooting with a high ISO sensitivity setting or with the Lighting feature can cause an increase in digital noise. Use a light or some other means to illuminate the subject.

Problem	Possible Cause and Recommended Action
A recorded image was not saved.	1) Camera power may have been turned off before the save operation was complete, which will result in the image not being saved. If the battery indicator shows  , charge the battery as soon as possible (page 19). 2) You may have removed the memory card from the camera before the save operation was complete, which will result in the image not being saved. Do not remove the memory card before the save operation is complete.
Though available lighting is bright, the faces of people in the image are dark.	Not enough light is reaching the subjects. Change the flash mode setting to  (Flash On) for daylight synchro flash (page 33), or adjust EV shift to the + side (page 48).
Night shots come out bad.	Use the following BEST SHOT scenes (page 39) when shooting at night. • Night Scene (for shooting night scenery only) • Night Scene Portrait (for shooting people against night scenery)
Subjects are too dark when shooting images in a seashore or ski area.	Sunlight reflected by water, sand, or snow, can cause underexposure of images. Change the flash mode setting to  (Flash Off) for daylight synchro flash (page 33), or adjust EV shift to the + side (page 48).
Digital zoom (including HD zoom) does not work. The zoom bar indicates zoom only up to a zoom factor of 5.0.	Date stamping may be turned on, which will cause digital zoom to be disabled. Turn off date stamping (page 86).
The image is out of focus during movie recording.	1) Focusing may not be possible because the subject is outside the focus range. Shoot within the allowable range. 2) The lens may be dirty. Clean the lens (page 96).

Problem	Possible Cause and Recommended Action
Playback	
The color of the playback image is different from what appears on the monitor screen when shooting.	Sunlight or light from another source may be shining directly into the lens when you are shooting. Position the camera so sunlight does not shine directly into the lens.
Images are not displayed.	This camera cannot display non-DCF images recorded onto a memory card using another digital camera.
Images cannot be edited (with resizing, trimming, rotation).	Note that you cannot edit the following types of snapshots. • Movies • Snapshots recorded with another camera
File Deletion	
A file cannot be deleted.	The file may be protected. Unprotect the file (page 59).
Other	
The wrong date and time are displayed, or the wrong date and time are being stored along with image data.	The date and time setting is off. Set the correct date and time (page 87).
The messages on the display are in the wrong language.	The wrong display language is selected. Change the display language setting (page 88).
Images cannot be transferred over a USB connection.	1)The USB cable may not be connected securely. Check all connections. 2)If the camera is not turned on, turn it on. 3)Your computer may not be able to recognize the camera if you connect via a USB hub. Always connect directly to the computer's USB port.

Problem	Possible Cause and Recommended Action
Language selection screen appears when the camera is turned on.	1) You did not configure initial settings after purchasing the camera or the camera may have been left with a dead battery. Check the camera setup (pages 19, 20). 2) There may be a problem with the camera's memory data. If this is the case, perform the reset operation to initialize the camera's setup (page 91). After that, configure each setting. If the language selection screen does not re-appear when you turn the camera on, it means that the camera's memory management data has been restored. If the same message appears after you turn power back on, contact your retailer or a CASIO authorized service center.
The time and date settings configured the first time after purchasing the camera are reset to their factory defaults when remove the camera's battery.	Load the camera's battery and reconfigure the time and date settings (page 20). Do not remove the battery from the camera for at least 24 hours after configuring time and date settings. After that, the settings will not be reset if you remove the battery. If the time and date are reset to their factory default settings when you remove the battery after it has been loaded for more than 24 hours, it could mean that the camera's setting memory is defective. Contact your retailer or a CASIO authorized service center.
Buttons are not responsive right after the power has been turned on.	With large capacity memory cards there is a delay after the power has been turned on before the buttons become responsive.
The camera records images I didn't shoot or the camera shoots an image whenever I touch the monitor screen.	Touch Shutter (page 42) is turned on. While Touch Shutter is turned on, take care that you do not touch the monitor screen while carrying the camera and avoid touching the monitor screen except when shooting an image or performing some other operation. If you do not want to use Touch Shutter, turn it off (page 42).

Display Messages

ALERT	The camera's protection function may have activated because camera temperature is too high. Turn off the camera and wait until it cools down before trying to use it again.
Battery is low.	Battery power is low.
Card ERROR	There is something wrong with the memory card. Turn off the camera, remove the memory card and then reload it into the camera. If this message re-appears when you turn the camera back on, format the memory card (page 90).  IMPORTANT! • Formatting a memory card deletes all its files. Before formatting, try transferring recoverable files to a computer or some other storage device.
Files could not be saved because battery is low.	Battery power is low, so an image file could not be saved.
Folder cannot be created.	You are trying to record a file while there are already 9999 files stored in the 999th folder. If you want to record more, delete files you no longer need (page 30).
Images are being uploaded. Please wait.	You are attempting to turn off power while image data is being transferred using the Eye-Fi card (page 79).
LENS ERROR	This message appears and the camera turns off whenever lens performs some unexpected operation. If the same message appears after you turn power back on, contact a CASIO authorized service center or your original retailer.

Memory Full	Memory is full with images you recorded and/or files saved by editing operations. Delete files you no longer need (page 30).
Record Error	Image compression could not be performed for some reason during image data storage. Shoot the image again.
RETRY POWER ON	The lens came into contact with an obstruction while moving. The camera will turn off automatically when this message appears. Remove the obstruction and turn power back on again.
SYSTEM ERROR	Your camera system is corrupted. Contact your retailer or a CASIO authorized service center.
The card is locked.	The LOCK switch of the SD, SDHC, or SDXC memory card loaded in the camera is in the locked position. You cannot store images to or delete images from a memory card that is locked.  The diagram shows a memory card with a switch labeled 'LOCK' at the top. An upward-pointing arrow indicates the switch is in the 'locked' position. The card itself is labeled 'MEMORY CARD'.
There are no files.	There are no files in built-in memory or on the memory card.
This card is not formatted.	The memory card loaded in the camera is not formatted. Format the memory card (page 90).
This file cannot be played.	The file you are trying to access is corrupted or is a type that cannot be displayed by this camera.
This function cannot be used.	This message will appear part way through an operation when you attempt to use a function that is not allowed in combination with another function.

Number of Snapshots/Movie Recording Time

Snapshot

Image Size (Pixels)	Approximate Image File Size	Built-in Memory (Approx. 14.2MB ^{*1}) Snapshot Recording Capacity	SD Memory Card (1GB ^{*2}) Snapshot Recording Capacity
14M (4320×3240)	3.24 MB	4	298
3:2 (4320×2880)	2.87 MB	4	336
10M (3648×2736)	2.27 MB	5	425
6M (2816×2112)	1.30 MB	10	743
3M (2048×1536)	820 KB	16	1178
VGA (640×480)	240 KB	56	4026

Movies

Image Quality (Pixels) / (Audio)	Maximum File Size	Approximate Data Rate (Frame Rate)	Built-in Memory (Approx. 14.2MB ^{*1}) Movie Recording Capacity	SD Memory Card (1GB ^{*2}) Movie Recording Capacity	File Size of 1-minute Movie
HD (1280×720) (Monaural)	Maximum Movie Size: 4 GB (or 29 minutes)	30.2 Megabits/second (30 frames/second)	2 seconds	3 minutes 56 seconds	226.3 MB
STD (640×480) (Monaural)		10.6 Megabits/second (30 frames/second)	8 seconds	11 minutes 42 seconds	79.0 MB

*1 Built-in memory capacity after formatting

*2 The above values are based on use of a PRO HIGH SPEED SD memory card (Panasonic Corporation). The number of images you can save depends on the type of memory card you are using.

- Snapshot and movie recording capacity values are approximate and intended for reference only. Actual capacity depends on image contents.
- File size and data rate values are approximate and intended for reference only. Actual values depend on the type of image being shot.
- When using a memory card with a different capacity, calculate the number of images as a percentage of 1GB.
- A single movie shoot with the “For YouTube” scene can have a maximum file size of 2048MB or a recording time of up to 15 minutes.

Specifications

File Format	Snapshots: JPEG (Exif Version 2.3); DCF 2.0 standard; DPOF compliant Movies: Motion JPEG AVI, IMA-ADPCM audio (monaural)
Recording Media	Built-in Memory (Image Storage Area: 14.2MB*) SD/SDHC/SDXC * Built-in memory capacity after formatting
Recorded Image Sizes	Snapshot: 14M (4320×3240), 3:2 (4320×2880), 10M (3648×2736), 6M (2816×2112), 3M (2048×1536), VGA (640×480) Movies: HD (1280×720), STD (640×480)
Image Deletion	1 file; all files (with memory protection feature)
Effective Pixels	14.1 Megapixels
Imaging Element	Size: 1/2.3-inch square pixel CCD Total Pixels: 14.48 Megapixels
Lens/Focal Distance	F3.2 (W) to 6.5 (T) f = 4.6 to 23.0 mm (equivalent to 26 to 130 mm in 35 mm format) Six lenses in five groups, including aspherical lens.
Zoom	5.0X Optical zoom, in combination 4.0X Digital zoom (20.0X in combination with optical zoom) Up to 79.7X when HD Zoom and Digital zoom are used in combination (VGA size)
Focusing	Contrast Detection Auto Focus - Focus Modes: Auto Focus, Macro Focus, Infinity, Manual Focus - AF Area: Spot
Approximate Focus (Snapshot) (From Lens Surface)	Auto Focus: 10 cm to ∞ (3.9" to ∞) (Wide Angle) Macro Focus: 10 cm to 50 cm (3.9" to 19.7") (Wide Angle) Infinity: ∞ Manual: 10 cm to ∞ (3.9" to ∞) (Wide Angle) * Range is affected by optical zoom.
Metering	Multi-pattern (center weighted for some BS scenes) by imaging element
Exposure Control	Program AE

Exposure Compensation	-2.0 EV to +2.0 EV (in 1/3EV steps)
Shutter	CCD shutter, mechanical shutter
Shutter Speed	Snapshot (Auto): 1/2 to 1/2000 second Snapshot (Night Scene): 4 to 1/2000 second * May differ due to the camera setup.
Aperture Value	F3.2 (W) to F8.0 (W) (When used with ND filter) * Using optical zoom changes the aperture value.
White Balance	Auto, Daylight, Overcast, Shade, Day White Fluorescent, Daylight Fluorescent, Tungsten, Manual WB
Sensitivity (Standard Output Sensitivity)	Snapshots: Auto, ISO 64, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600 equivalent Movies: Auto
Self-timer	Approximate Trigger Times: 10 seconds, 2 seconds
Flash Modes	Auto, Off, On, Red-eye reduction
Flash Range (ISO Sensitivity: Auto)	Normal: 0.4 m to 2.5 m (1.3' to 8.2') (Wide Angle) 0.8 m to 1.2 m (2.6' to 3.9') (Telephoto) * Range is affected by optical zoom.
Flash Charging Time	Approximately 5 seconds maximum
Recording	Snapshots; Macro; Self-timer; BEST SHOT; Touch Shutter; Face Detection; Anti Shake; Lighting; Movies (normal movie and For YouTube) (with monaural audio)
Monitor Screen	3.0-inch TFT color LCD 230,400 (960×240) dots Touch Screen
Viewfinder	Monitor Screen
Timekeeping Function	Date and Time: Recorded with image data Auto Calendar: To 2049
World Time	162 cities in 32 time zones City name, date, time, summer time
External connection terminal	USB port (Hi-Speed USB compatible, USB charging) / AV output terminal (NTSC/PAL)
Microphone	Monaural
Speaker	Monaural
Power Requirements	Rechargeable lithium ion battery (NP-120) ×1

Approximate Battery Life

All of the values provided below represent the approximate amount of time under normal temperature (23°C (73°F)) before the camera turns off. These values are not guaranteed. Low temperatures shorten battery life.

Number of Shots (CIPA) (Operating Time)*¹	170 shots
Continuous Playback (Snapshots)*²	2 hours 30 minutes
Approximate continuous movie recording time*³	1 hour 10 minutes

- Battery: NP-120 (Rated Capacity: 600 mAh)
- Recording Medium: 1GB SD memory card (PRO HIGH SPEED (Panasonic Corporation))
- Measurement Conditions

*¹ Approximate number of shots (CIPA) (Operating Time)

In accordance with CIPA (Camera and Imaging Products Association) standards
Normal temperature (23°C (73°F)), monitor on, zoom operation between full wide and full telephoto every 30 seconds, during which two images are shot with flash; power turned off and back on every time 10 images are shot.

*² Approximate playback time

Standard temperature (23°C (73°F)), one-image scroll approximately every 10 seconds

*³ Approximate time using a 4GB SDHC memory card for a repeated cycle of 10 minutes recording followed by deletion of the recorded file.

- The above values are based a new battery, starting from a full charge. Repeated charging shortens battery life.
- Frequency of flash, zoom, and Auto Focus usage, and the time the camera is on greatly affects recording time and number of shots values.

Power Consumption	3.7 V DC, Approximately 3.5 W
Dimensions	94.9 (W) × 56.3 (H) × 20.3 (D) mm (3.7" (W) × 2.2" (H) × 0.8" (D)) (17.6 mm (0.69") thick excluding projections)
Weight	154 g (5.4 oz) (including battery and memory card) 138 g (4.9 oz) (excluding battery and memory card)

■ Rechargeable lithium ion battery (NP-120)

Rated Voltage	3.7 V
Rated Capacitance	600 mAh
Operating Temperature Requirements	0 to 40°C (32 to 104°F)
Dimensions	35.5 (W) × 40.2 (H) × 5.0 (D) mm (1.40" (W) × 1.58" (H) × 0.20" (D))
Weight	Approximately 14 g (0.49 oz)

■ USB-AC adaptor (AD-C53U)

Input Power	100 to 240 V AC, 50/60 Hz, 100 mA
Output Power	5.0 V DC, 650 mA
Operating Temperature Requirements	5 to 35°C (41 to 95°F)
Dimensions	53 (W) × 21 (H) × 45 (D) mm (2.1" (W) × 0.83" (H) × 1.8" (D)) (excluding projections)
Weight	Approximately 37 g (1.3 oz)

- Power cord precautions for use in Singapore
The power cord set is not supplied. The power cord used must comply with relevant national and/or international standards.

CASIO®

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